

CHILTON'S

MOTOR AGE

December, 1957



merry christmas

**Would you like to make
this announcement?**

**"WE OFFER
THE WORLD'S BEST
RING JOBS"**



You can make this claim with Sealed Power KromeX Piston Ring Sets

When you install KromeX, you're giving your customer the world's best ring job because KromeX sets have Sealed Power's new stainless steel oil ring (U.S. Pat. No. 2,789,872). The performance record of this ring is so phenomenal America's two largest auto manufacturers have adopted it as standard original equipment.

Replacement Record Equally Astounding

In replacement service mechanics and fleet owners have discovered just as astonishing

results. KromeX ring sets with the stainless steel oil ring positively control oil even in tapered or out of round cylinders—positively control smoking under deceleration. The oil ring will not sludge or corrode because of the stainless steel finish. And it has chrome-plated steel side rails for more than double normal ring life. These rails seat instantly. Available in Sealed Power KromeX ring sets for engines which require super oil ring performance.

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power KromeX Ring Sets

BEST FOR RE-RING!

BEST FOR RE-BORE!

THERE'S A PERMATEX PRODUCT FOR EVERY MAINTENANCE NEED



SEALING COMPOUNDS

Form-A-Gasket No. 1
Form-A-Gasket No. 2
Form-A-Gasket No. 3
Super '300' Form-A-Gasket
Pipe Joint Compound No. 51



SEALANT-CEMENTS

Stick-N-Seal
Gasket Cement
Glass Sealer
Indian Head Gasket Shellac Compound



SHOP REPAIR ITEMS

Valve Grinding Compound
Prussian Blue



OILS & LUBRICANTS

Penetrating Oil
Solvo Rust
Toon-Oyl
Anti-Seize Compound
Indian Head Clear Rubber Lubricant



POLISHES & CLEANERS

Blue-Blazes Silicone Cleaner-Polish
Perma-Lustre Cleaner-Polish
Acrylic Cleaner & Polish
Taroff
Car Wash
Fabric Cleaner
Windshield Cleaner Concentrate
Chromium Polish



COOLING SYSTEM PRODUCTS

Block & Head Sealer
Cooling System Cleaner & Conditioner
Water Pump Lubricant & Radiator Anti-Rust
Heavy-Duty Radiator Cleaner
Radiator Sealer (liquid)
Double Action Radiator Cement
Indian Head Radiator Cement



HYDRAULIC FLUIDS

Knee Action-Jack-Shock Absorber Oil
Hydraulic Jack Oil
Heavy Duty Brake Fluid
Moderate Duty Brake Fluid
Automatic Transmission Fluid (Type A)
Hudson Clutch Fluid
Indian Head Hydraulic Brake Fluid



PERMATEX COMPANY, INC.

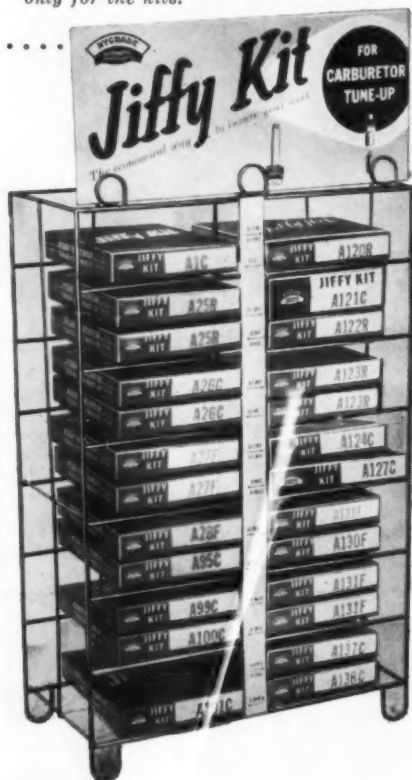
General Offices: 300 Broadway, Huntington Station, N. Y.

Factories: Brooklyn 35, N. Y., Kansas City 15, Kans.



JIFFY-RAKS ARE FREE

Ask your jobber about JIFFY KITS in balanced JIFFY-RAK Merchandising assortments. It's the handy way to keep your kits. You pay only for the kits.



Want details in a jiffy? Call your jobber today, or write HYGRADE PRODUCTS DIVISION, Standard Motor Products, Inc., Long Island City 1, N. Y.

MONEY-MAKING CARBURETOR TUNE-UPS IN A JIFFY

Save time, prevent mistakes, make more money on every job, with HYGRADE's convenient JIFFY KITS.



JUST THE PARTS YOU NEED IN A JIFFY! Gaskets, pump pistons, needles and seats, extra parts where necessary, complete instructions for each kit, and even the gauges you need for the job! All in one compact package. It's economical. (You only pay for the parts you always use.) You'll want JIFFY KITS for every make and model car.

HYGRADE *Jiffy Kit*

carburetor tune-ups in a jiffy!

Chilton's MOTOR AGE, DECEMBER, 1957

CHILTON'S

MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

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DECEMBER 1957

Vol. 77, No. 1

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There's a
GM Training Center
near you!



TAKE ROCHESTER CARBURETOR TRAINING FREE AND "SIGN UP" FOR MORE JOBS . . . MORE PROFITS!

All signs point to success—when they say "Rochester Carburetors!" And the quickest road to automotive service success is through Rochester-UMS Training. It puts you in line for *more jobs*—Rochester Carburetors are specified as original equipment on more new cars than any other carburetor . . . *more profits*—because you'll learn how to do jobs faster, more efficiently. And the training is free!

So sign up now! Write to Service Department, United Motors Service Division, General Motors Corporation, General Motors Building, Detroit 2, Michigan.

R ROCHESTER
CARBURETORS



ROCHESTER PRODUCTS DIVISION OF
GENERAL MOTORS, ROCHESTER, N. Y.

*Specified as original equipment
on more new cars than any other carburetor*



"...we're free to concentrate on sales and service"

says **CLIFFORD O. GLEDHILL**
Courtesy Motors, Inc., Salt Lake City

"Our sales are not restricted to a certain area, so we need a finance set-up that can handle customers efficiently no matter where they live or where they move—in state or out. The nationwide offices of COMMERCIAL CREDIT do a thorough job of handling all our financing needs. We're free to concentrate on sales and service. We shopped around before selecting COMMERCIAL CREDIT PLAN four years ago and found it's the best for both the dealer and his customer. No matter what phase of their operation you pick, whether wholesale financing, the finance reserve, or complete dealer control of financing, COMMERCIAL CREDIT is tops."

Commercial Credit dealers are successful dealers

Write or call our nearest office for complete information on the benefits of COMMERCIAL CREDIT PLAN. Why not do it today?



A service offered through subsidiaries of the Commercial Credit Company, Baltimore . . . Capital and Surplus over \$200,000,000 . . . offices in principal cities of the United States and Canada.

Precision Bearings . . . PLUS !



There's more here for you than meets the eye . . .

The red-and-black Federal-Mogul package contains a lot more than bearings! Invisible, but highly valuable to you, are the service aids available through your jobber. Federal-Mogul provides literature and manuals containing specific installation information. He also has

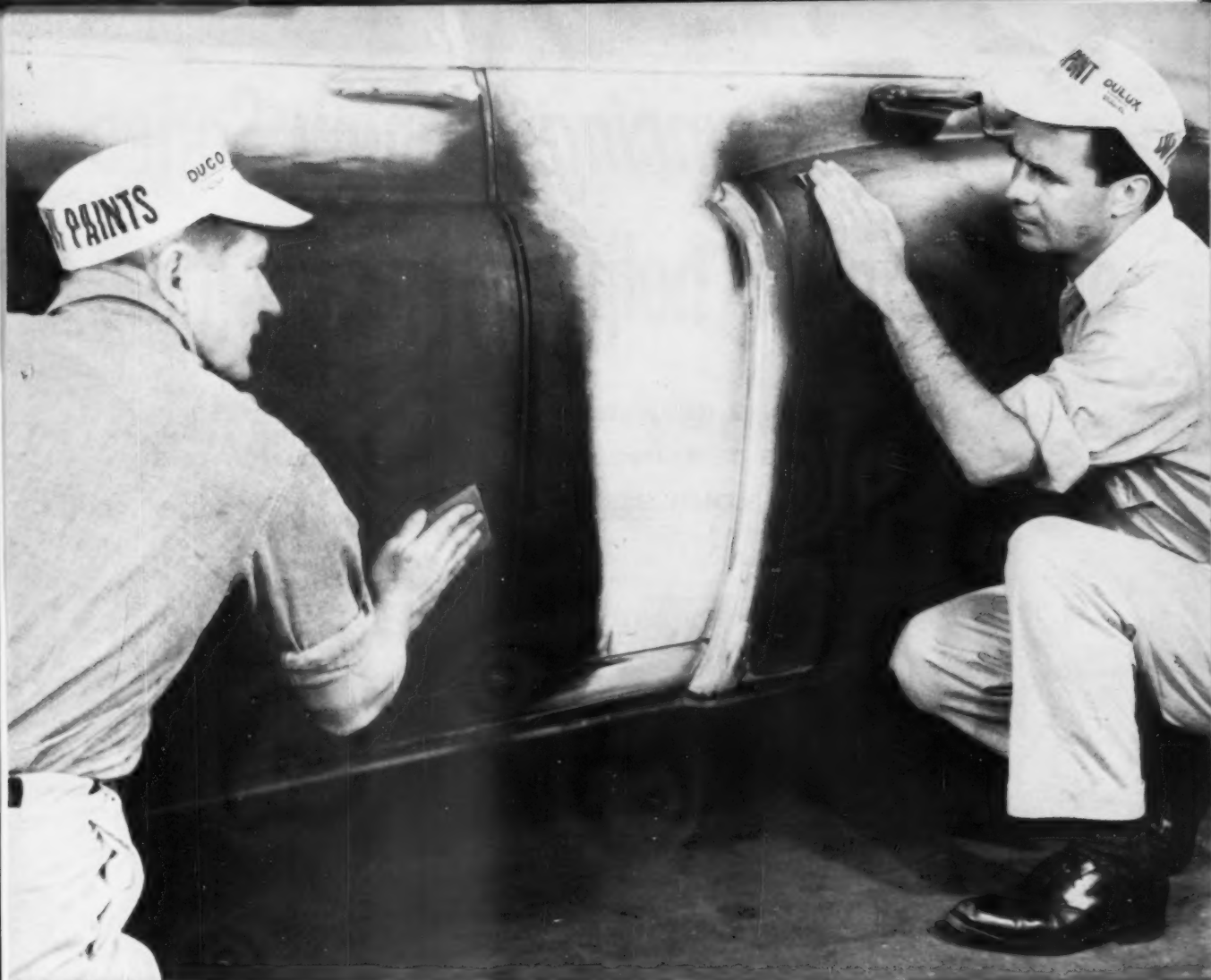
special bearing service tools that will make your job go more easily, quickly and surely. This assistance is always ready for you—it was designed to help you toward better bearing service. *Ask your Federal-Mogul Jobber!*

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.
DETROIT 13, MICHIGAN



RESEARCH • DESIGN • METALLURGY • PRECISION MANUFACTURING • SERVICE



Primer-Surfacer sanding race shows how to get jobs out faster with less labor!

To save costly shop time, test the sanding speed of your primer-surfacer. You'll get fast, easy sanding with no tearing or pulling when you use High Speed "Duco" Primer-Surfacer. It actually gives the *fastest* sanding that can be obtained without sacrificing other important features. And what are these other features? Fast filling, fast drying, plus a beautiful color holdout for high gloss with less rubbing. You'd save with High Speed "Duco" Primer-Surfacer even if it cost more. But since it reduces 2 to 1 (1 gal. gives 3 at the gun), it costs less than many so-called "bargain" primers. You save money with High Speed "Duco" Primer-Surfacer every time!

*Fast-drying
Easy-sanding
Money-saving*

"DUCO" LACQUER HIGH SPEED PRIMER-SURFACER

DU PONT REFINISHING MATERIALS



REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Announcing—A new Series and tester to help you make more

- ★ MORE EFFICIENT CLEANING
- ★ MORE ACCURATE TESTING ★ LESS SERVICING TIME
- ★ DOES YOUR SELLING FOR YOU

SERIES "800" UNIT FEATURES

1. Compressed air inlet— $\frac{1}{2}$ " pipe thread—male
2. Double-action valve for cleaning and dusting
3. Tester button switch
4. Synthetic rubber cleaner adapter and clamp
5. New tester sparking-indicator dial—simplifies testing
6. Rubber covered high tension cable and clip
7. Tester compression chamber and spark plug adapter
8. Needle valve for fine control of tester air pressure
9. Recessed mirror and compression chamber window
10. Complete set rubber cleaner adapters
11. Complete set steel tester adapters
12. Gray, baked enamel, hammered-tone finish



DEALER'S PRICE
Bench Model \$64.50
Floor Model \$67.50

"800" Champion spark plug cleaner money—in less time!

Dealers who have sales-tested the new "800" series Champion service unit call it the greatest merchandising aid in spark plug history!

This new Champion unit has 4 big advantages over any other spark plug cleaning and testing equipment: better cleaning, more accurate testing, faster servicing—and a "built-in salesman" that does your selling for you.

Champion's new "800" service unit helps you make more money on spark plug service because it helps you do a better job in less time. A new filter keeps all dust and dirt out of the cleaning abrasive . . . assures you fast, efficient, even cleaning of *every* plug.

The "built-in salesman"—a new type of sparking-indicator gauge—shows directly if an old plug should be replaced. It eliminates the bother (and possible inaccuracy) of checking the old plug against a new one. This new gauge measures a plug against a fixed standard. Your customer can *see for himself* if new Champions are needed. This

easy-to-understand gauge makes your sales-talk for you.

You don't have to *sell* the new plugs—you just install them.

There are real profits to be made from spark plug sales and service. And this advanced Champion cleaner and tester can help you make more money—in less time—and with less effort. Your new "800" service unit can be the biggest profit-maker in your service department—and your cost is only \$64.50 for the bench model, \$67.50 for the floor model. Order yours from your Champion supplier—*today*.

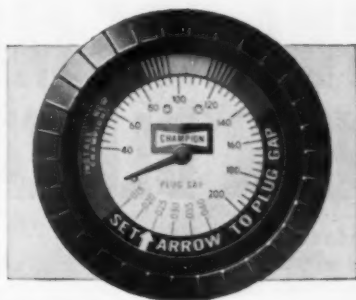


CHAMPION

SPARK PLUGS



NEW DOUBLE-FILTER CLEANER BAG—separates dirt and dust from cleaning abrasive—faster, more dust-free cleaning action—simple to service.



NEW SPARKING-INDICATOR TESTER DIAL—a new, simpler method of testing spark plugs—single plug test saves time—sells new Champions *fast*.



HEAVY-DUTY WATER TRAP—now standard equipment—keeps abrasive compound free from air-line moisture—protects air lines, etc. from rust.

CHAMPION SPARK PLUG COMPANY • TOLEDO 1, OHIO



*It was full of
tire chains
before the
storm hit!*

WEED CHAINS ARE MONEY IN THE BANK WHEN BLIZZARDS COME!

Unless it just stops snowing in these United States, tire chains are one of your safest winter investments. One good snow and out they go—we've yet to see anything else that can do the job WEED V-Bar chains can in really bad weather. So stock up—take care of your regular customers and keep an eye on the profits at the same time. Sell WEEDS—the people know them.

WEED **V**-BAR TIRE CHAINS



American Chain & Cable Company, Inc., York, Pa., and Bridgeport, Conn. • In Canada: Dominion Chain Company, Ltd., Niagara Falls, Ont.

In Business for Your Safety



MOPAR mufflers add extra miles— built for today's powerful gas surges

Sell your service to your customers: be sure they understand the need for a quality muffler, built for today's more powerful, high-compression engines.

And be sure they understand these major advantages of the MoPar muffler:

- engineered by Chrysler Corporation for Chrysler Corporation vehicles
- top rigidity and longer life
- extra strength, less vibration
- quick operation
- greatest safety protection
- less back pressure

You'll be helping yourself by making the most of those MoPar sales points. You'll sell more mufflers—and you'll make and keep loyal, satisfied customers.

MoPar mufflers are official, authentic Chrysler Corporation products. Order from your MoPar wholesaler salesman or your Plymouth, Dodge, De Soto, Chrysler or Imperial dealer now.



MOPAR DIVISION ➤ CHRYSLER MOTORS CORPORATION
DETROIT 31, MICHIGAN



24-HOUR SERVICE

on Pittsburgh Safety Glass

There's no need to carry large inventories of automotive safety glass when you order glass through Pittsburgh Plate's Depot System. No matter what type of automotive glass you must replace, you can easily get it from your nearest Pittsburgh Plate Branch or Warehouse on 24 hours' notice.

Don't crowd your shop . . . don't carry large inventories, trying to anticipate your Safety Glass replacement jobs. Let us be your warehouse. When you have a replacement job, call Pittsburgh Plate. In 24 hours or less, the exact

piece of glass you need will be in your shop. Your job will be finished and your customer on his way, completely satisfied.

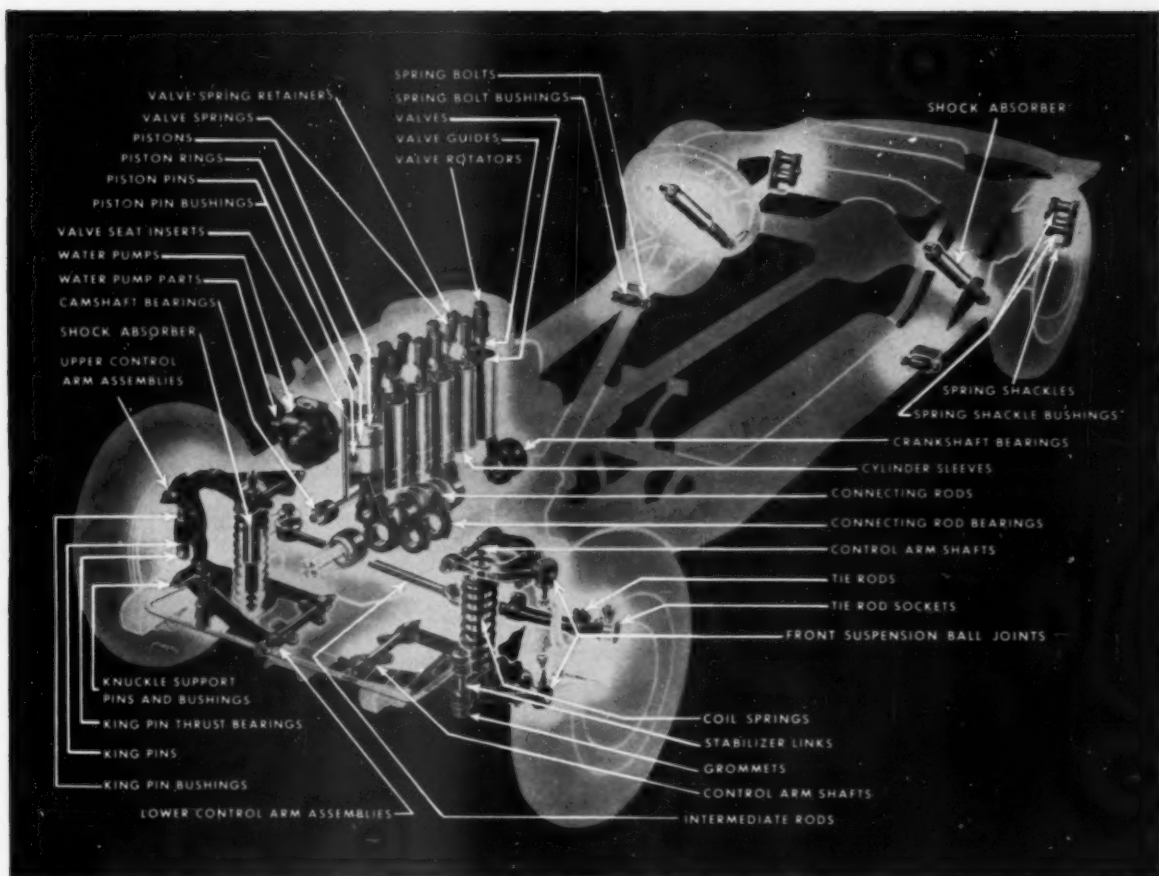
Pittsburgh Plate's Depot System gives you 24-hour service on all types of Safety Glass, Curved or Flat, Clear or SOLEX®, in DUPLATE® Safety Plate Glass, DUOLITE® Safety Window Glass or HERCULITE® Tempered Plate Glass. For full information, contact your nearest Pittsburgh Branch or Distributor, Pittsburgh Plate Glass Company, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.



Paints • Glass • Chemicals • Brushes • Plastics • Fiber Glass

PITTSBURGH PLATE GLASS COMPANY

In Canada: Canadian Pittsburgh Industries Limited



THOMPSON PRODUCTS

"the original equipment line"

ENGINE AND CHASSIS PARTS FOR CARS, TRUCKS, TRACTORS, BUSES

● For over half a century Thompson has been known as "the original equipment line". Every well-known manufacturer of cars, trucks, tractors, buses—even aircraft—uses Thompson parts as original equipment. That's because they know that Thompson parts are reliable parts.

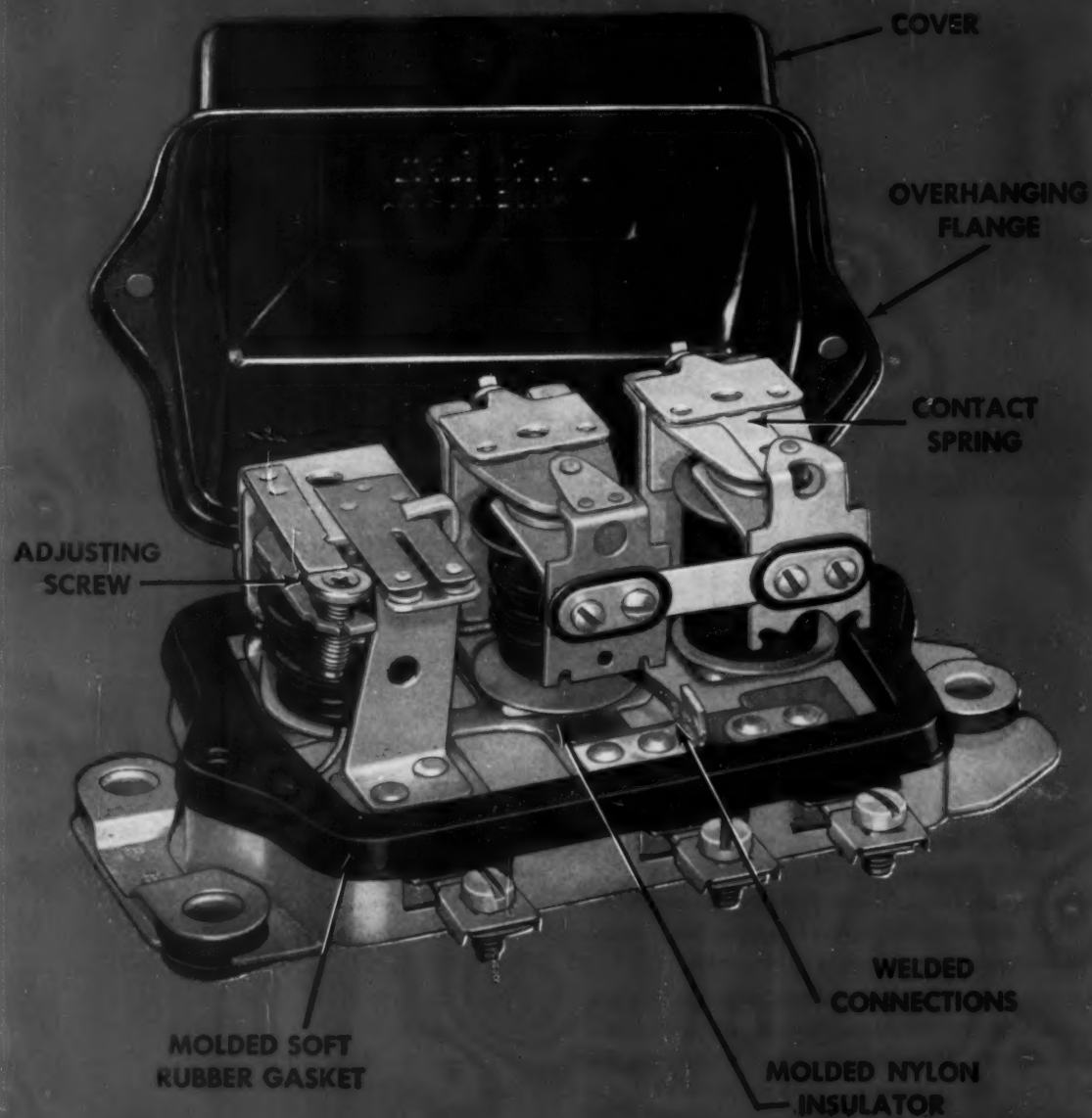
Repairmen and servicemen, too, must stake their reputations to a large degree on the quality and serviceability of the replacement parts they install. Poor fitting, poor performing parts cost you labor, cost you money, cost you customers.

Protect your business by always installing precision made Thompson parts. Do as the automotive manufacturers do. Rely on Thompson engine and chassis parts—"the original equipment line".

TP Thompson
Service Sales

DIVISION OF
Thompson Products, Inc.
CLEVELAND 3, OHIO

PROGRESSIVE ENGINEERING MAKES THE DIFFERENCE



DELCO-REMY WATERPROOF STANDARD REGULATORS GIVE IMPROVED ALL-WEATHER PERFORMANCE

Better electrical performance and greater dependability in any weather are important user benefits found in Delco-Remy's waterproof standard generator regulators, now available for general replacement use.

And here are the features that make them the *right* regulators for millions of Delco-Remy equipped cars and trucks.

- ① New overhanging one-piece formed-steel cover and mating base shed road splash . . . convenient attaching screws are *outside* the enclosed area. Molded soft rubber gasket seals out harmful oil and water vapors.
- ② Integral sleeves of molded nylon insulator form permanent seal around rivets—assure watertight base.
- ③ New, longer, more flexible armature contact spring on voltage regulator unit assures more positive closing of contact points for smoother operation.
- ④ Welded electrical connections, and highest quality tungsten and non-tarnishing precious metal contact points, assure minimum resistance, maximum durability.
- ⑤ Special fine thread screw-type controls allow easy, highly accurate adjustment of all three units.

Always replace with Delco-Remy waterproof regulators when you service Delco-Remy equipped cars and trucks. These improved regulators, built to highest quality standards by the original equipment manufacturer, are available from your car or truck dealer or the United Motors System.

DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



GENERAL MOTORS LEADS THE WAY—STARTING WITH

Delco-Remy

ELECTRICAL SYSTEMS



No question about the right way to start customers off to a smooth-driving future—sell them **Quaker State!** It's the years-ahead, Pure Pennsylvania Motor Oil, best for high compression engines and great for business. Satisfaction by the quart!

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA. • MEMBER PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION

WEAVER

SERVICE EQUIPMENT



**will help you get more
business into your shop...
and more profit out of it!**

You don't need to add any space . . . nor add any men . . . to get a greater share of the automotive service business . . . Simply add modern Weaver Equipment to enable your shop to profitably handle the services you have been passing up.

As pioneers, and the largest manufacturer of major service equipment, Weaver will help you. Detailed service manuals and instruction sheets are supplied right along with equipment.

Here's the deal where everybody benefits. When this modern equipment is used, work can be turned out faster, with less effort, — and more jobs can be completed each day . . . Mechanics can make more money . . . Service Department can make more profit . . . And, customers get quicker and better service.

**All 28 major items of Weaver equipment
are AVAILABLE on EASY TIME PAYMENTS**

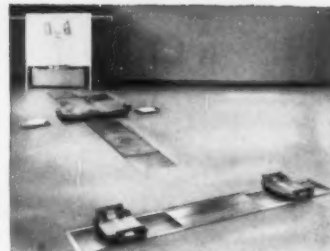
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WEAVER

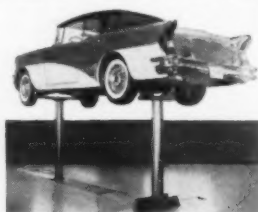
MOST COMPLETE LINE OF MAJOR

**You're Ahead-
THE WEAVER WAY**

DeLuxe
"Twin Post"
Lift Wheel
Alignment Outfit



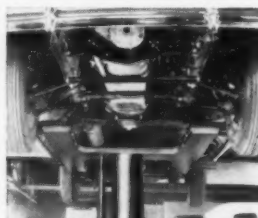
Twin Post Lifts
Available in 8 models
to handle all vehicles



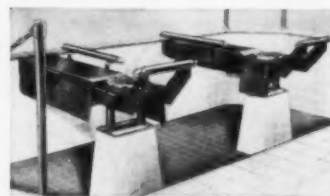
"Rack Type"
Alignment Outfits
For all passenger cars



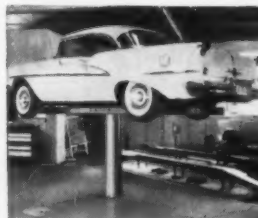
Single Post
Frame Type Lifts
For all passenger cars



"Floor Level"
Alignment Outfits
For locations where
floor space is limited



Single Post Lifts
Available either
"free-wheel" rail type
or "roll-on" type



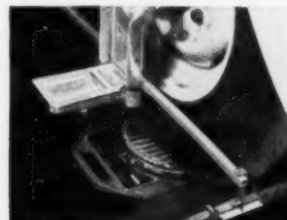
3-Way
Alignment Gauges
For faster, easier
wheel alignment
service



Triple Post Lift
For servicing heavy
tractor-trailer units



Tru-Way
Toe Gauges
For fastest, accurate
method of checking
"toe"



established 1910

oldest and largest manufacturer of AUTOMOTIVE SERVICE EQUIPMENT

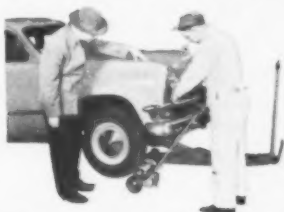
**Wheel
Counterbalancers**
Make accurate
dynamic balance in
few moments



**Lo-Hi-Draulic
Jacks**
In 2, 4, 10 and 20 ton
capacities



**Dynamic
Wheel Tester**
Instantly shows need
for wheel balancing



Wheel Dollies
Available in 3 models
to answer every need



Unit Lift
For removing
transmissions,
drive shafts, etc.



**Hydraulic
Bumper Lifts**
With exclusive
foot operation



Car Washers
Adaptable to all type
operations



**Mechanical
Bumper Jacks**
For lifting passenger
cars by bumpers
**Hydraulic
Hand Jacks**
For under-axle use.
In 1½, 3, 5, 8, 12 and
20-ton capacities



Wash Rack Jacks
Specially designed for
speeding wheel washing



Service Stands
in 5, 10 and 14 tons
capacity.



WEAVER

established 1910 • oldest and largest manufacturer of

**MOST COMPLETE LINE OF MAJOR
AUTOMOTIVE SERVICE EQUIPMENT**

Brake Testers
Available in 5 models
to handle every load
requirement

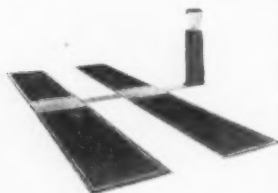


**Photoscope
Headlight Testers**
Come in portable and
track type

**Rayoscope
Headlight Testers
(Extreme Right)**
In portable and
track types



**Combination
Brake and
Alignment Testers**
Come in
3 models to meet
varied requirements



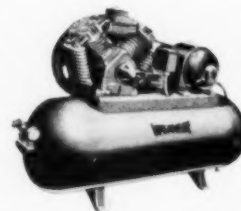
**Electric Eye
Headlight Testers**
3 models, portable and
track types



**Wheel Alignment
Testers**
Made in
4 models,
surface and
flush types



Air Compressors
45 models to
choose from



CLIP and MAIL COUPON for FREE CATALOGS

WEAVER MANUFACTURING CO., SPRINGFIELD, ILLINOIS, U.S.A.
Please send free descriptive literature and details on the following
Weaver items:

NAME _____

TITLE _____

FIRM NAME _____

STREET ADDRESS _____

CITY _____ ZONE _____ STATE _____



WEAVER MANUFACTURING CO.
Springfield, Illinois, U.S.A.

Have oil seals when you need them!

1. Call your National Oil Seal jobber

He has complete stocks of top quality, original-equipment National Seals—fills almost all orders instantly. On “odd-ball” or very old numbers, he’s backed up by a nearby Federal-Mogul warehouse. He won’t tell you “we’ll order from the factory—10 days!” He’ll say “tomorrow at the latest!”
CALL HIM FOR YOUR SEAL AND BEARING NEEDS!

2. Install a National Seal Service Stock

Your National jobber will gladly—and quickly—install a fast-turnover National Seal stock in your own shop. He maintains it; no work for you. You have popular seals when, where you need them. Two stocks—one holds over 100 front and rear wheel seals, the other, about 50 front wheel seals. Free cabinet, world’s easiest price and interchange information.

America’s largest selling replacement seal—approved original equipment on cars, trucks, buses and off-highway vehicles.

FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.
Detroit 13, Michigan

4489





SELLING *SLANTS*

MONEY-MAKING FACTS

AC announces new flexible gasoline line assortment with merchandising rack

AC
FLEXIBLE GASOLINE LINES

GL43	GL57	GL59	GL106	GL51	GL09	GL82	GL115	GL109	GL70	GL113	GL32	GL41	GL110	GL76
------	------	------	-------	------	------	------	-------	-------	------	-------	------	------	-------	------



FM-33
Merchandiser Assortment

Assortment covers:

**CADILLAC • CHEVROLET • BUICK
OLDSMOBILE • PONTIAC
and
practically all other American cars**

YOUR COST... \$15³⁶
(Rack Free)

**Your profit
on sales of lines... \$10²²**

Includes

**15 fast moving types—
21 lines in all—
plus this attractive
wall rack FREE!**

Another fine assist for you from AC . . . the FM-33 Merchandiser Assortment which covers the bulk of the market and includes a handy, handsome wall rack for line storage.

The sturdy, steel rack, finished in attractive, high-luster AC colors, provides easy-access storage for the 21 AC Gasoline Lines included in the assortment, plus additional storage slots for other lines.

CALL YOUR REGULAR



SUPPLIER

Watch Walt Disney Studios' ZORRO every week on ABC-TV



THE ELECTRONICS DIVISION OF GENERAL MOTORS

OF THE MONTH!
FOR DEALERS

AC presents the new eight-pack spark plug display cabinet at only \$4⁶⁰



Here's just what you need for spectacular display of the new AC Eight-Packs. This handsome, ruggedly built, heavy-gauge steel cabinet, with transparent plastic door, holds 36 Eight-Packs—a total of 288 AC Spark Plugs.

Easy to check stock

The attractive heavy transparent plastic door makes quick stock checking easy. Packages are always neat, clean—and *there* when authorized personnel need them. The door is piano-hinged at bottom, strongly overlaps the steel cabinet sides, and has hasp equipment for padlocking. Door is decorated with colorful embossed plug and flash design.

Holds 36 Eight-Packs

(a total of 288 plugs)

This cabinet fits easily on shelf or counter, has generous capacity, includes clip-slot under top for AC Spark Plug Applications Chart, sent with cabinet.

It's a selling display piece, too. On the top, as shown, is a fold-up steel message plate identifying and selling the product. Ask your AC Supplier about this low-cost cabinet.

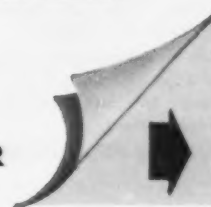
- DURABLE • HANDSOME
- COMPACT • ORNAMENTAL

- Heavy, Clear Plastic Door • Built-in Hasp for Padlock •
- For Shelf or Counter • Piano-Type Hinging • Heavy Steel Construction • Shipping Weight 12-lbs.
- Finished in Blue, Red and White

ORDER YOURS NOW FROM YOUR



SUPPLIER





SELLING *SLANTS*

MONEY-MAKING FACTS

The unique
**AC
AIR
CLEANER
TESTER**

(MODEL M)

Dealer Price
\$39.95



SPECIFICATIONS—AC Air Cleaner, Model M—29" high, base, 23½" in diameter. Plugs into any conventional 110-volt AC outlet.

No air compressor required. Rugged metal construction with easy-to-read, calibrated scale. Shows whether element is clean, partially clogged or needs immediate replacement.

Shipping weight 26-lbs.

NOW you can test and sell new AC Air Cleaner Elements *with the flip of a switch!*


The paper air cleaner market potential is growing daily by leaps and bounds. More than 40% of all 1957 cars are so equipped and many of these paper air cleaners already need replacement.

The new Model M, AC Air Cleaner Tester is your answer. With the flip of a switch, you can demonstrate to the customer how clogged air cleaners reduce air passage efficiency and increase operating costs.

Another important point: this new tester is completely portable; use it anywhere . . . service area . . . pump island . . . or in the lube bay.

Pays for itself quickly!

A recommended fifty cent service charge for testing elements—an average profit of \$1.70 per element sold—lets you recover the \$39.95 cost of this equipment in a hurry! In fact, it pays for itself many times over, making sales on its own, by giving a buyer visual proof of need. Order yours at once from your AC supplier.

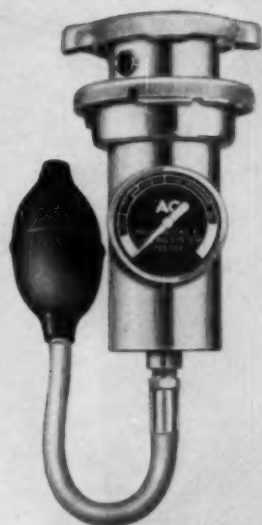
ORDER TODAY FROM YOUR  **SUPPLIER**

OF THE MONTH!

FOR DEALERS

Two big reasons why...

Profit-minded dealers everywhere now sell AC Filler Caps



FM-19 Tester

Only
\$10⁰⁰

FROM ANY
AC
SUPPLIER

TESTS ALL
PRESSURE CAPS
AND
COOLING SYSTEMS


2. THE AC CABINET MERCHANDISER ASSORTMENT

Just what the doctor ordered for the average service station... a husky, all-steel cabinet in handsome AC red and blue colors, to keep your cap stocks organized and available. Plus... an assortment of 57 fast moving, high quality AC Radiator Pressure and Gasoline Caps, 17 types in all, that cover most of the market.

Your cost for the complete deal— **\$31³³**

Your Profit on the sale of the caps— **\$14⁹⁷**



AC  THE ELECTRONICS DIVISION OF GENERAL MOTORS

1. THE AC PRESSURE CAP AND COOLING SYSTEM TESTER

Faulty cooling systems and "tired" pressure caps that can't hold their rated pressures often contribute to poor engine performance. Unfortunately, many times, your brand of gasoline might get the blame.

That's one reason why AC developed this low cost tester... to help you locate and quickly correct cooling-system troubles. Dealers say the AC Tester is one of the best \$10 investments they've ever made.

And here's a seasonal tip. Now's the smart time to buy your AC Tester, because the only *sure* way you can guarantee your customers' all winter anti-freeze protection is to give every cooling system a complete check.



FM-13 Merchandiser Assortment

LOOK AT THESE FEATURES!

- All-Steel Construction
- Eye-Catching Colors
- Lots of Room for Additional Caps
- Specification Chart on Reverse Side of Display Panel

CALL YOUR REGULAR



SUPPLIER TODAY!

Watch Walt Disney Studios' ZORRO every week on ABC-TV

"There is a difference in

FOR SAFETY'S SAKE
INSIST ON GENUINE
WAGNER LOCKHEED!



Wagner Lockheed

the best known name in brake service



brands of brake fluid..."

Wagner Lockheed **BRAKE FLUID** *is better because it's balanced!*

YOU GAIN—and your customers gain—when you supply genuine Wagner Lockheed Brake Fluid... There's none better... None safer.

This top-quality fluid surpasses S.A.E.* specifications. It is compounded of the finest ingredients, and it is chemically balanced to permit it to withstand sub-zero temperatures without solidifying... to withstand extreme heat (generated from high-speed stops and hard usage) without gassing.

Also, because it is properly balanced chemically—Wagner Lockheed Brake Fluid does not cause formation of gummy residue, swelling of rubber parts, or cause corrosion of metal parts in the system... It does absorb a necessary amount of moisture, and does function properly under all operating conditions.

Wagner Lockheed Fluids answer all service needs. 21-B is for trucks, buses and cars where heavy-duty type fluid is recommended or required by state law. When ordering, specify genuine Wagner Lockheed—the brand that has been the leader for 33 consecutive years... Available in 12 oz., quart, gallon, 5 gallon, and 54 gallon containers.

*Society of Automotive Engineers.



YOU can depend upon Wagner Quality because Wagner Products are used as original equipment by car, bus, truck and trailer manufacturers.

CLIP and MAIL COUPON for details, and for FREE copy of valuable Bulletin HU-411 on Hydraulic Brake Servicing.

**WAGNER LOCKHEED BRAKE PARTS,
FLUID AND LINING...AIR BRAKES...AIR HORNS...
TACHOGRAPHS...NOROL...ELECTRICAL PRODUCTS**



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Please send us Bulletin HU-411 on Hydraulic Brake Servicing.
We understand that there is no charge or obligation.

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H57-2



*Joe sure has
a way with
cars*

*with customers too...
Joe uses Timken®
bearings for
replacement!*

You can be a winner every time with your customers. When they need a tapered roller bearing, install a Timken bearing. And tell 'em it's Timken. It's a name that always wins . . . a name that means quality—America's best-known bearing. When you say "Timken" you tell 'em you use the best in replacement parts. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".



CUSTOMERS LOVE YOU WHEN YOU REPLACE WITH AMERICA'S BEST-KNOWN BEARING...JUST TELL 'EM IT'S...

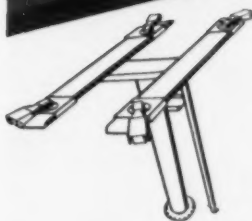
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TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

SELECT THE MOST PROFITABLE HOIST FOR YOU

... from the complete **GLOBE** line

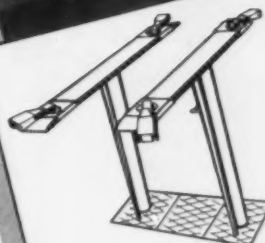
"Frame-Contact" SINGLE POST F-10

8,000 lbs. lifting capacity.
Accommodates all cars.
Easy spotting ... fast lifting.
Ideal for full cycle of service
and repair work. Available
either semi- or full-hydraulic.
Furnished with set of
4 Continental Adapters.



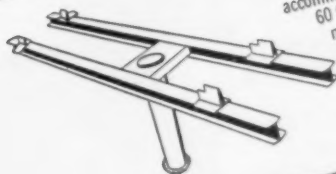
"Frame-Contact" TWO POST F-27

8,000 lbs. lifting capacity.
Accommodates all car
wheelbases. Wide open
accessibility to all underside
parts. Low cost installation.
Furnished with set of
4 Continental Adapters.



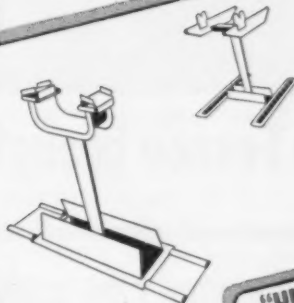
FREE WHEEL SINGLE POST FW-10

A Globe leader for more than
20 years. 8,000 lbs. lifting
capacity. Wheelbase
accommodations range from
60 to 160". Recessed or
non-recessed ... avail-
able both semi- and
full-hydraulic.



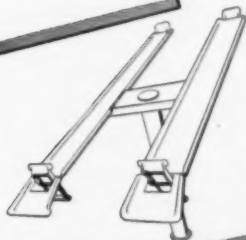
AUTO AND LIGHT TRUCK TWO POST SR

A floor-recessed
hoist with 8,000 to
14,000 lbs. lifting
capacity ... 3
types manufactured
for wheelbases
up to 182".



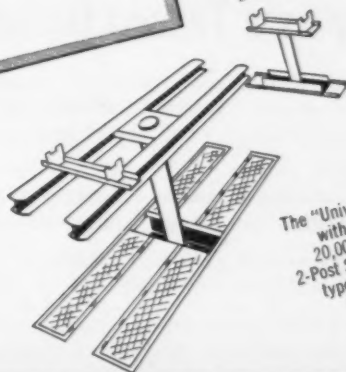
ROLL-ON SINGLE POST RO-10

Permits quick
servicing ... no
wheel spotting or
jack adjustment.
Unrecessed ...
8,000 lbs. lifting
capacity ...
wheelbases to 160"
accommodated.
2 types.



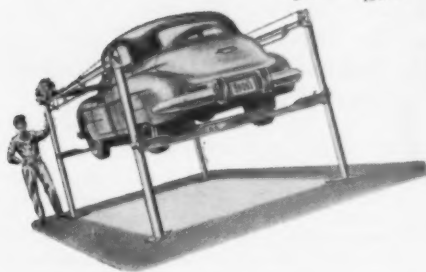
"UNIVERSAL" TRUCK TWO POST SLR

The "Universal" Truck Hoist
with lifting capacities of
20,000 lbs. to 40,000 lbs.
2-Post Saddle and Long Rail
type. Low initial cost ...
economical operation.



ELECTRIC 4-POST

For upper floor installations, for
temporary locations, or where
excavation is impossible. Both free-
wheel and roll-on types
available. Capacity 7500
lbs. 5 models.



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THE BEST LIFT

1ST

in Automotive HOISTS

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BRANCHES: DET. MOBILE - PHILADELPHIA - LONG BEACH, CALIF.



"Changing to Texaco brought me real money"

says Charles K. Stowers,
successful Texaco
Dealer in Dallas, Texas.



6 reasons why you can make money as a Texaco Dealer!

THE BEST petroleum products, known and accepted by car owners in all 48 states. Continuous research and development insure that Texaco will always have outstanding products.

THE BEST and biggest national advertising program . . . constantly *selling* Texaco Dealers to car owners everywhere.

THE BEST point-of-sale promotion material to help bring customers in and bring them back!

THE BEST customer credit card—in fact, the *only* petroleum credit card honored under *one* sign in all 48 states . . . and in Canada, too.

THE BEST retailer policy—Texaco doesn't compete with its dealers . . . cooperates with them in promoting their sales of nationally advertised and accepted TBA products.

THE BEST opportunity to cash in on "touring" business—because motorists know they can get famous Texaco products wherever they drive.



WRITE OR PHONE TODAY if you'd like to be your own boss—a TEXACO Dealer. Let's talk it over. No obligation. Get in touch with the Texaco Division Office nearest you.

"I tried one dealership, then changed to another, but never made any real money until I changed to Texaco in 1939. I was selling 2,900 gallons a month then. I've grown steadily. Now I am doing 50,000 gallons and expect to reach 65,000 gallons a month by the end of the year.

"I've found that any help you ask from Texaco — within reason — you'll get. That's how Texaco keeps its large, national Dealer Family together — with *more take-home money*.

"To any ambitious man who has the opportunity to get a Texaco dealership and be his own boss, I say, *better take it!*"

THE TEXAS COMPANY

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That You May Inherit a Blessing

YOUR loyalty, as a reader of MOTOR AGE, is something that is deeply and humbly appreciated by the editors of this magazine. Loyalty is without price. It fires the writers' imagination and inspires them to do a constantly better job—for you.

This is a time for good wishes—and ours is that you may inherit a blessing. The blessing of good business and fair profit.

Since MOTOR AGE is and continually strives to be an important shop tool—we are pleased to tell you that something is about to happen. This shop tool of yours is being enlarged and improved to help you through a prosperous 1958.

That event takes place with the January, 1958, ASIdeas (Automotive Service Ideas) issue. We're up to our ears in plans, pictures, paragraphs and punch lines. Nothing's too good for our readers, is our motto. Watch for the "new" MOTOR AGE in January and thereafter. It will help you in your profit strategy all year long.

How to Win at Indianapolis

THE late Joe Dawson, old-time winner at Indianapolis was guest speaker at an affair in his honor, shortly after he became a National hero, at Indianapolis. Earl Mylecraine, of Atlantic Refining, was toastmaster. He hailed old Joe with great gusto and said, "Now, Joe, will tell us how to win at Indianapolis!" Joe got up and the following is his entire speech: "How to win at Indianapolis? That's simple. You come in first."

To You and Yours

IN the true spirit of the Christmas season we, the men of MOTOR AGE, extend to you and yours the sincerest wishes for a happy and holy holiday season.

Faithfully yours,

Frank Tighe

EDITOR



of course I use Pedrick Formflex rings what else?

Formflex Chrome rings are the "key" to the "new car" pep and efficiency your customers want in their car engines. Pedrick's exclusive "Equalizer" provides equal pressure everywhere around the rails for the utmost conformability and a more perfect seal. Result: quickly restored power, new oil and gas economy, much longer life, more satisfied customers.

Pedrick

PISTON RINGS



WILKENING MANUFACTURING CO., Phila. 42, Pa.
IN CANADA: Wilkening Mfg. Co. (Canada), Ltd., Toronto

Mister

JOBBER EXECUTIVE

A condensation of key items of the Jobber field is shown below. At a glance you can keep up-to-date on important events, speeches and trade conventions

● UNIFICATION APPARENT?

As Motor Age goes to press word flashed that National Standard Parts Association's executive committee and board of directors have approved Aug. 14 recommendations of MEWA Reorganization Committee and NSPA Unification Committee.

Joint recommendation as originally worded carried in September's Motor Age, called for a "consideration of the board of director's of each of the respective association's in the interest of the industry as a whole, (that) a new association be formed under a new name."

Aug. 14 resolution provided for review by the respective boards of MEWA and NSPA of the proposal for unification. If boards approved, same plan to be put before the memberships of NSPA and MEWA for subsequent ratification.

MEWA's Board approved the "broad outline" of plan. Authorized establishment of \$25,000 to initially finance reorganization of associations.

● '58 PACIFIC AUTOMOTIVE SHOW—Reports on the Pacific Automotive Show, to be held in Los Angeles at the Pan Pacific Auditorium on Feb. 20-23, indicate that this event will be one of the largest ever held.

More than 350 manufacturers of parts, equipment, accessories, chemicals and allied lines drew for exhibit space in the Show. With the NSPA and the MEWA holding their Annual Conventions during the two days preceding the Show, all attendance records for the event are expected to be broken.

● RUARK SPEAKS TO FOREIGN TRADE ASSN.—B. W. Ruark, general manager of MEWA, was key speaker to 37 delegates from nine European countries on Nov. 6 at the Sheraton Hotel in Chicago.

Mr. Ruark, who discussed the function of trade associations, was assisted in the discussion by Martin Fromm of Martin Fromm and Associates. Mr. Fromm stressed the promotional aspects of trade association work.

● SPRAY PAINTING SCHOOL—More than 2,500 students have attended the spray painting school sponsored by the Binks Manufacturing Company, Chicago, since 1949. According to the company, the students learn how to select the correct equipment for the job and how to maintain this equipment.

Conducted every month of the year, except July and August,

the classes are limited as to number, to offer maximum individual attention.

● GLASS CONVENTION—

The tenth annual convention of the National Auto and Flat Glass Dealers Association witnessed the association's first trade show. Suppliers installed 34 booths for the industry's investigation. Discussed were problems of stocking glass. Also selling and advertising, and servicing and installation problems.

● EXECUTIVE CITES FUEL

BOOST—The catalyzing effect of today's 100-octane motor fuels is needed by some 1958 automobiles. This was the thought expressed to the Automotive Old Timers by Dr. Charles L. Thomas, director of Sun Oil Company's Research and Development Dept. "Some 1958 models use up to 400 horsepower," Dr. Thomas said. "This power would not be possible without a corresponding increase in the octane quality of gasolines."

He pointed out that compression ratios have increased from a 1947 average of 6.5 to today's 8.9. For the same period, horsepower has risen from 115 to 230.

Operation JOBBER

Check Your 1958 Program

ACCORDING to the 37th edition of "Automobile Facts and Figures," published by the Automobile Manufacturers Association, 1956 set a record for the number of registered drivers in the United States. Over 77,800,000 people carry operator's licenses. In fact during 1956 alone, 3,180,000 drivers were added to the ever-increasing total who chalked up a record of 628,000,000,000 vehicle-miles. This averages about 8,000 miles per individual.

These impressive figures give a green-light to the tremendous sales and marketing opportunities in the Automotive Service Industry next year. For both manufacturers and jobbers.

Making sound selling, advertising, and merchandising plans for the big sales year ahead are **MUSTS**.

Have we a check list to use? Yes. By reviewing these items we'll know better how and what to advertise:

What to Advertise

1. By all means advertise your name, service slogan, phone number and addresses of main store and branches.

2. New lines, since they have

news value. You can quickly "tie-in and cash-in" with the advertising and promotional campaigns of the manufacturers of these new lines.

3. Special or seasonal drives often account for spectacular and speedy increases in sales volume. Make a list of all the drives planned for the year. Even better, make up a calendar with start and stop dates for each promotion.

4. Automotive jobbers neglect advertising of machine shop services. Work with your leading suppliers whose products fit into the machine shop operation. Then build a special campaign that features the range, quality and speed of service. Build up the experience of the highly trained mechanics of shop employees.

5. Sell your salesmen. Send out sales bulletins or postcards carrying pictures of your salesmen. Tell about their background, how they can help your customers do a better buying and selling job.

6. The management of your company is one of your greatest business assets. Let the trade know the vast number of years your organization and its key

people have been faithfully serving the trade.

7. Your counter salesmen are important. They face your customers and prospects every day. Tie in your countermen and associate their names when you recommend a product or service to the trade.

8. Don't forget your nationally-known, highest quality products that have already been pre-sold to your customers and prospects. No other business organization in your community can give quick service on parts, accessories, tools, equipment and supplies for all vehicle makes.

Delivery Service

9. If you operate pick-up and delivery service make sure this special service is known and understood. It costs a great deal of money to operate, so why not make this unique selling tool pay as big dividends as possible.

Set your selling sights high. Plan a well integrated advertising and merchandising campaign. Tie your local promotional plans into the efforts being made in your behalf by the manufacturers, whose lines you represent. Then 1958 **CAN BE YOUR BANNER YEAR!**

Motor Age's Who's Who



David G. Collins has been named vice president of SpeedWay Manufacturing Company of Cicero, Ill., a subsidiary of Thor Power Tool Company of Chicago. He will be in charge of the Electric Motor Div.

John Towler, general manager of Sparton Automotive Division has been elected a vice president of the parent company, Sparton Corporation, Mich.



Edward F. Bauman has been promoted to director of Purchasing Staff Activities for Federal-Mogul - Bower Bearings, Inc. He was formerly Director of Purchases for the firm since 1940.

Dan T. Bradley has been named vice president and technical advisor and **Frank S. Treco, Jr.**, has been appointed general sales manager of Clevite Harris Products, Inc.



Jack S. Truax has been promoted to Zone Manager of the Fram Corporation of Providence, R. I. He will have headquarters in Minneapolis and will cover North and South Dak., Minn., Wis. and part of Mich.

C. E. Johnson has been appointed sales manager of the Original Equipment Division of Alondra Sales, Inc., Los Angeles.

Frank I. Goodrich, vice president-administrative of the Eaton Manufacturing Company, was elected a director of the company.



Frank C. Maley, left, and **Frank Montry** have been appointed to the sales staff of Merit Mufflers. Maley will be territory manager in Western N. Y., and North Central Pa. Montry will serve in the Chicago area.



Joseph N. Stafford, left, and **Jack H. Allen** have been appointed new territory managers for The AP Parts Corporation. Stafford will headquarter in Nashville and Allen will headquarter in Newport, Ky.

Carl L. Kahlert has been appointed acting manager of the Replacement Division of Thompson Products, Inc.

C. E. Flora has been appointed manager of industrial sales of Davey Compressor Co., Ohio.

J. E. Bickel, formerly Director of Merchandising of the Monroe Auto Equipment Company, was made vice-president in Charge of Merchandising at the company's annual meeting.



Adrain R. Fisher has become chief executive officer of Johns-Manville Corporation when he was elected chairman of the board. He also continues as president and director of the company. **Clinton B. Burnett** was elected executive vice president and made a director of the firm.

Robert Twells has been appointed Group Executive in charge of Spark Plug Division of the Electric Auto-Lite Company. He was made a vice president of the company in 1948.



Frank Potts has been appointed assistant to Karl A. Roesch, vice president of The White Motor Company and general manager of the Autocar Division, Exton, Pa.

Frederick H. Guterman has been elected a vice president of Allen B. Du Mont Laboratories, Inc.

J. S. Mather, Jr., has been appointed Director of Sales for the Textile-leather Division of the General Tire and Rubber Company. He was formerly general sales manager.



signs of the times

AP Corp. Sells Power Division

The Miracle Power Products Corp., Cleveland, has purchased The Miracle Power Division of The AP Parts Corp., according to AP President, Ralph G. Rule.

Rule explained that AP will expand the products and services of its exhaust system. AP has operated the Miracle Power Division, producers of additive-type products, for the past ten years.

Jerrold Snett, vice president and general manager of the newly formed Miracle Power Products Corp., said the Cleveland firm is associated with the Eveready Pressurized Products, Inc.

Enlarge Distribution

Snett said the new company would enlarge its distribution methods with automotive wholesalers and car manufacturers. He added that military and civilian aviation fields would be strengthened.

Grizzly Holds Brake Clinic

Another in a series of Grizzly Brake clinics was held recently in Campbell, Calif., at Bev Arntzen Automotive Service. Some 50 proprietors, foremen and brake specialists from local garages, service stations and brake shops attended.

The clinics are part of a nation-wide program to acquaint operators with new products and latest maintenance methods.



NSPA 1958 Convention Program Committee: Center front: Marty Bazner, Sr., (chairman), Ammco Tools. Seated around the table left to right: Elmer Cleson, Jr., NSPA staff; Leonard Stout, NSPA staff; William Hodges, Bill Hodges Auto Parts; Frank A. Brusek, Motor and Axle Parts Service; S. J. Mack, M and L Motor Supply Co.; Russ W. Case, Jr., The Chilton Co.; Howard McMurchie, NSPA staff; Ray Barnett, The Irving-Cloud Publishing Co.; Harold Johnson, Sidles Co.; Vern Olcott, Jr., Red's Motor Parts; D. D. Minshall, Gates Rubber Co.; Norman Parker, H. H. Parker and Son; Herman Teetor, Perfect Circle; J. L. Wiggins, NSPA Executive Vice President. Absent from photo: Les A. Thayer, Bel-Den Mfg.



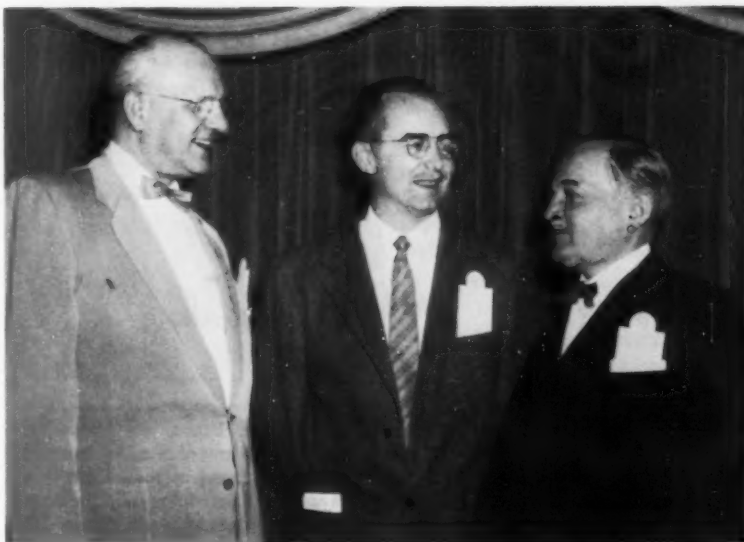
A special "Saturday Evening Post Citation for Creating Consumer Demand" was presented to Mustang Replacement Engines and C. A. Dunmore (left), executive vice president, during the Mustang Trade Press Conference held in Garland, Texas. Post's "Ham" Cochran (right) made presentation.

MEWA Announces Essay Contest

"On-the-Job Training" will be the theme of the 1958 convention essay contest for MEWA's Young Executive Group. Contestants will discuss how on-the-job training boosts efficiency and work morale.

The Motor Equipment Wholesalers Association has limited essays from 500 to 2,000 words. Essays must be written by a registered Young Executive Group representative.

The three winners will receive government bonds and scholarships to executive development schools. The first place winner will attend MEWA's national convention, February 17-19 at Los Angeles. Closing date for contest is midnight, January 5.



Delaware Valley's Automotive Old Timers gather in The Barclay Hotel, Philadelphia, to hear Sun Oil Company executive, Dr. C. L. Thomas, describe the inseparable bond between petroleum and today's automobiles. Dr. Thomas in photo is between R. A. Harp (left), Philadelphia AOT Council president and Leslie M. Peat, executive secretary of AOT.



H. B. Barrett, President, Barrett Equipment Co. (rt.), presenting the Grand Prize, a B-500UP Drum-Dokter Lathe, to Charles Channell, service man for Willard Karl Motors, Pasadena. Presentation was made during opening of the Barrett Los Angeles office. Assisting is Gerry Stearns, Director, Barrett Brake School; R. L. Stotlemeyer, Assistant Sales Manager and I. M. Gregory, Barrett's West Coast Regional Manager.

New FATA Clubs Given Salute

Future Automotive Technicians of America clubs were given a solid indorsement at the recent Minnesota Trade and Industrial convention. J. Ray Riley, representing National Standard Parts Association, told the convention that only the nation's high schools can ease the growing shortage of automotive technicians.

Riley, in behalf of NSPA, himself a former director, presented a check to the new FATA for organizational purposes. The FATA was initially proposed as a Minnesota organization, but the group's program springboarded to a national level.

Riley said a survey revealed a growing awareness of school officials to youthful opportunities in the automotive industry.

Gillhouse to Head Compressor Group

Loren Gillhouse, Sales Manager of Quincy Compressor Company, has been elected president of the Air Compressor Research Council. He succeeds D. R. B. Robson, President, Keystone Compressor Company.

Accepting the position, Gillhouse warned against failure to make themselves truly competitive. "We can meet this challenge," he said, "by improving our technical field service comparable with advances in compressor design and construction."

Klaus to Address Convention Groups

Charles A. Klaus, director and vice president of sales of Maremont Automotive Products, Inc., will address the 11th Annual NADA Equipment Exhibition. The exhibit will be part of the 41st Annual Convention of Na-



Joanne Boyne, hostess for Chicago's Leisure Time Exposition, helps display the Maremont Trophy awarded each year to one of the nation's top hot rodders. Assisting is Jim Lamona, events director of Automobile Timing Association of America.

tional Automobile Dealers Association. The convention will take place at the Miami Beach Auditorium, January 11-15.

Klaus, a veteran of the exhaust system parts business, will speak on "Muffler Service and Profit." He is a former president of NSPA.



T. C. Watkins was elected president of Automotive Wholesalers of Texas. Other officers above are (bottom row, left to right) Fred D. Pinkston, first vice president; T. C. Watkins; J. M. Vesmirovsky, past president; Mrs. H. G. Baker, secretary; (top row, left to right) Poncho Oatman, treasurer; G. E. Williams, assistant director; W. E. Woods, second vice president; G. C. Morris, executive director.

Freedlander Cited By Norway Award

A. L. Freedlander, chairman of the board of Dayton Rubber Company, has been named a Knight of Norway's Royal Order of St. Olaf. The award is the highest Norway can bestow upon a civilian.



A. L. FREEDLANDER

The Honorable Thor Brodtkorb, representing the King of Norway, singled out Freedlander "for his contribution to the industrial progress of Norway over the past 25 years. He helped Norway to help itself," Brodtkorb said.

Lawn Mower Award To Motor Producer

The National Lawn Mower Dealers Assn. presented their award to Briggs & Stratton Corp., Milwaukee, producers of 4-cycle engines. The award was the first of its kind given an engine manufacturer.

Presented at the National Hardware Show in New York's Coliseum, it was given for overall contribution to the Power, Lawn and Garden Equipment Industry.

MEWA Directors

The following have been elected directors of Motor and Equipment Manufacturers Association for the 1958-59-60 term. K. W. Foust, Bonney Forge and Tool Works; T. S. Rose, Sealed Power Corporation; C. O. Spillman, III, Associated Producers Inc.; and R. H. Wilbur, The Kendall Company.

Industry Meetings

- Feb. 3-6, 1958 — Automotive Accessories Manufacturers of America exposition, Navy Pier, Chicago.
 Feb. 8-9 — Automotive Wholesalers of Oklahoma convention and booth conference, Municipal Auditorium, Oklahoma City.
 Feb. 18-19 — Motor & Equipment Wholesalers Association convention, Statler Hotel, Los Angeles.
 Feb. 18-19 — National Standard Parts Association convention, Ambassador Hotel, Los Angeles.
 Feb. 20-23 — Pacific Automotive Show, Pan Pacific Auditorium, Los Angeles.
 Apr. 23-25 — Southeast Automotive Show trade conference, Bon Air Hotel, Augusta, Ga.
 Apr. 27-29 — Michigan Automotive Wholesalers Association, Pantlind Hotel, Grand Rapids.
 May 11-14 — Automotive Engine Rebuilders Association convention, Sheraton-Park Hotel, Washington, D. C.
 June 15-16 — Automotive Wholesalers Association of Alabama convention, Birmingham.



Thermoid Company of Trenton, N. J. announces the opening of the above westcoast warehouse at 129 Sylvester St., South San Francisco. Storage and shipping space totals 20,000 sq ft. with an additional 1800 sq ft for offices. Thermoid's automotive and industrial sales representatives will operate from this site. J. Dale Evans has been appointed manager.

Automotive Wholesalers' Sales and Inventories

Data from Bureau of the Census, Department of Commerce

Region	Sales			Inventories	
	Per Cent Change				
	Sept. 1957 from Sept. 1956	Sept. 1957 from Aug. 1957	9 Mos. 1957 from 9 Mos. 1956	Sept. 1957 from Sept. 1956	Sept. 1957 from Aug. 1957
New England.....	+ 5	- 2	+ 9	+ 3	+ 4
Middle Atlantic.....	- 2	- 2	+ 6	0	- 4
East North Central.....	+ 4	- 4	+ 9	+ 2	+ 1
West North Central.....	+20	0	+11	+ 8	- 1
South Atlantic.....	- 4	- 2	+ 4	+ 5	0
East South Central.....	+13	- 1	+ 8	+12	+ 3
West South Central.....	+16	- 7	+ 6	+ 7	+ 3
Mountain.....	+30	- 4	+11
Pacific.....	+ 4	+ 2	+ 4	- 9	- 3
United States.....	+ 8	- 1	+ 6	+ 5	+ 1

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from—	
				Month Ago	Year Ago
PRODUCTION					
Motor Vehicles (Units).....	417,936	341,407	485,759	+22.4	-14.0
Industrial—F. R. B. 1947-'49=100 (Adj.).....	142	144	146	- 1.4	- 2.7
SALES					
New Cars.....	460,000	495,217	424,414	- 7.1	+ 8.4
Replacement Tires (Units).....	5,901,827	6,488,365	5,237,738	- 9.0	+12.7
Manufacturers (\$ Millions)					
Durable Goods.....	\$14,114	\$14,297	\$13,449	- 1.3	+ 4.9
Non-durable Goods.....	\$14,122	\$14,341	\$13,697	- 1.5	+ 3.1
Department Stores, 1947-'49=100.....	121	128	122	- 5.5	- 0.8
GENERAL					
Consumers' Price Index, 1947-'49=100.....	121.1	120.0	117.7	+ 0.9	+ 2.9
Civilian Employment.....	66,005,000	65,674,000	66,174,000	+ 0.5	- 0.3
Unemployment.....	2,508,000	2,552,000	1,909,000	- 1.7	+31.3

An Open Letter to Automotive Wholesalers . . .

Advertising in the trade press is the finest possible support for you.

It is your customer, the repairman, who decides which brand of product to buy for almost everything you sell--not the public, not the car owner. And this brand decision is almost always made by the man your salesman calls on. Perfect Circle has called him "the Doctor of Motors." And the function of advertising is to sell him on specific brands of automotive parts, accessories, supplies and equipment.

When your supplier presents a dominant, consistent month-after-month campaign in the automotive trade press, it is the very best move he can make to lessen sales resistance, to increase your volume and therefore to increase your profit.

When MOTOR AGE is chosen as the foundation of his automotive trade press campaign, it is because MOTOR AGE has carefully selected, through personal interviews, exactly those of your customers who are guaranteed to do their share of at least 80%, and probably 94%, of the automotive service volume.

MOTOR AGE is the only automotive service publication which can and does make that guarantee, and therefore controls its distribution to just those shops which are your important customers and prospects. Only MOTOR AGE makes a money-back guarantee to the advertiser that the shops receiving MOTOR AGE do 80% of the repair volume, buy 80% of the parts and buy 80% of the equipment and supplies. (The difference between the 80% guarantee and the 94% actually delivered is our "hedge" against market changes.)

One important thing that has been proved about MOTOR AGE in 8 big surveys among your customers, is that MOTOR AGE has more people actually reading it than any other automotive service book. And among those readers, MOTOR AGE has the greatest prestige.

Your suppliers' campaigns in THE NEW EXPANDED MOTOR AGE are the ultimate in advertising support to increase your profits.

RUSSELL W. CASE, JR.
PUBLISHER

MOTOR AGE

newscoop

*Dual Air Conditioners
Rear Suspension Changes
One Year Warranties
GM's Basic Body Shell
Low Car Woes
Hardtops Gain*

In the days ahead HERE'S WHAT TO LOOK FOR!!!

Dual Air Conditioners

WHAT NEXT? Dual air conditioners for cars One auto company to bring out twin air cooler system soon One unit up front, other in trunk.

Changes In Rear Suspension

NEW APPROACH to independent rear suspension, elimination of front seat transmission explored Method involves shorter, more compact transmission Gear-box enclosed in rounded housing about size of converter in diameter.

With assembly mounted closer to engine, transmission would extend back into fire wall four inches Permits flat floor in front Propeller shaft runs into differential bolted to underbody, permitting independent rear springing.

More Psychological Than Real?

ONE-YEAR WRITTEN WARRANTIES being considered by auto companies Ford may be first to announce Value may be more psychological than real.

One company notes that 90 per cent of its warranty work done by dealers is already extended beyond 90 day period Reason: Customer pressure for better quality.

Body Shops, Attention!

CHRYSLER CORP. now using unique system to fasten exterior side mouldings Eliminates drilling holes in body, major cause of water leaks and rust.

Mouldings snap onto metal "retainers" then spot welded along body Winged-type clip inserted into inside wall of moulding, "locks" over retainer.

One Basic Body Shell

BASIC BODY SHELL in '59 being considered by GM Exception: Cadillac Reason: Saving in body tooling costs.

Use of different quarter panels, hoods, deck lids to provide individuality for each line At present GM uses three body shells.

Low Cars Bring New Woes

LOW CARS bringing woe to Michigan's traffic engineers Yellow no-passing lines on hills, lengthened to compensate for lowness of cars.

Past standard called for sight distance on grades from point 4½ feet above ground to similar sight 1000 feet away That standard now outmoded, traffic engineers say Drivers not getting maximum vision from lower seat position when going uphill.

Eyes Medium Priced Field

MERCURY'S LOW-PRICED Medalist series reintroduced This series dropped last year Hopes for more sales in medium price field Will sell for \$100-\$125 under Monterey series.

Fuel Economy Boosts Sixes

SIX-CYLINDER ENGINE expected to hold its own Reason: Renewed interest in fuel economy Sales share of sixes declined in '57 Percentage-wise decline not as great as in previous years.

Chevrolet sixes went into 38 per cent of '57 cars, compared with 40 per cent in '56; 55 per cent in '55.

Ford V-8's lost ground this year Percentage of installation dipping to 86 per cent from 89 in '56.

Closing Price Margin Gap

PRICE MARGIN between Ford and Chevy narrowed Plymouth moves to scale down prices to closer parallel Ford, Chevy.

1957 price between Plymouth's, Chevy's low-end model, about \$55 Margin for '58 reduced under \$20.

Plymouth's '58 prices average 2.9 per cent higher than '57 Chevy upped prices 5.7 per cent; Ford, 2½ per cent.

Forerunner Of New Development?

NON-FUNCTIONAL GIMMICK in roof panel over backlight on Chevy's Impala originally designed to accommodate new type ventilating system Division planned it for '58, but ran into problems These, it hopes to solve soon.

Swinging Door Problems!

NEW TREATMENT in car doors may soon show up One company thinking of hinging back doors at rear pillar Cadillac Brougham recently revived it.

Advantage: Easier entry into rear compartment However to become practical, door locking devices must be improved.

Boom In Replacement Sales

AUTOMOTIVE REPLACEMENT sales next year expected to approach \$5 billion Figure based on manufacturers' selling price.

Retail sales expected to reach \$9 billion This includes \$5 to \$5½ billion in parts sales, excluding tires Also \$4 billion in customer labor sales.

Reasons: Rising number of cars, trucks Increasing need for repairs on cars produced in '55.

Brighter Outlook For Independents

SITUATION BRIGHTER for two independent automobile companies American Motors reports net profit exceeding \$1 million in Oct. Rambler sales for year topped all records First 10 months totalled 77,318, surpassing '55.

Studebaker-Packard continues in red, but reduces losses considerably Nine-month period company lost \$12.3 million, lost \$49.6 million last year.

Third quarter loss fell sharply under same period last year From \$14.1 million to \$5.5 million.

Gains Made By Hardtops

HARDTOP MODELS in '56 accounted for nearly one-third of car sales Gains made in this body style illustrated in 1957 edition of "Automobile Facts and Figures," published by Automobile Manufacturers Assn.

In 1956 hardtops took 31 per cent of market This was four percentage points more than during '55 Nearly double the share in '54, when they accounted for only 17.1 per cent of sales.

Two, four-door sedans losing ground. In 1956 they accounted for 53 per cent of market This compares with 59 per cent in '55; 73 per cent in '54.

Washington Wire



Looking For Tax Cut?

DON'T: No cut in federal taxes foreseen in '58 or anytime soon Greater defense spending to offset Russian missile successes, the reason Pressure on for increase of \$2 billion military spending in '58 Remote possibility that taxes may be increased.

Six Million Cars: Sales Goal

DEALERS MAY SELL more than six million cars in '58 Forecast made by Byron J. Nichols, Chrysler Corp. v-p and general manager of marketing.

1955's bought on installment terms ripe for trade-in, he said Finance men figure buyers will pay more to finance new cars Perhaps \$2.50 more per \$1,000 borrowed.

Spotlight Used-Car Sales

SENATE auto marketing subcommittee may spotlight '58 used-car sales. Sales, financing and insuring of cars may be studied.

Group heard testimony earlier in year on blank-contract deals, too-high collision insurance rates.

NADA's Plans On Servicing

NADA'S COMMITTEE on auto servicing responsibility changed approach in drafting new plans on servicing Chief factors: Legality of plans, needs of dealers.

Victor Hansen, U. S. Assistant Attorney General, suggested two previous proposals might be legally doubtful (Motor Age, November, 1957).

Is Business Levelling-Off?

INDICATIONS point to levelling-off period Business experts say the worst that may happen will be: Mild decline, closer cost squeeze on seller.

Federal Reserve Board frees more funds as offset to any general slide in business Action may produce another jump in credit buying.

Upgrading Of Skills

UPGRADING OF WORKER skills is first line problem for country, as U. S. Labor Dept. see it Skills must be better in order to produce enough for 193 million people by 1965.

Output of goods, services must be boosted to \$560 billion for that year It will take another 10 million fully trained workers to do job.

Are Car Prices Too High?

AUTO INDUSTRY executives to talk about car prices before Senate group Sen. Kefauver will argue that industry pricing practices cost public too much money.

Chrysler, GM, Ford, American Motors to be represented Another witness is Walter Reuther, UAW chief.

Marketing Areas With Greatest Expansion

PACIFIC COAST and Rocky Mountain states are marketing areas expanding with greatest speed New customers moving into these areas by thousands.

Eleven Western states added 4.5 million people since 1950 That's pickup of 23 per cent, compared to national average of 11 per cent Arizona, Nevada lead with increases of over 40 per cent each.

Supply Of Mechanics Growing

SERVICE STATIONS taking maintenance, repair work can expect supply of new auto mechanics to climb Govt. figures show 10,000 training to become mechanics.

In 1956 4 per cent of auto mechanics were in gasoline service stations.

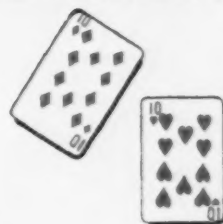
Tire With Inner Tire Developed

NEWLY PATENTED is tubeless tire designed to give added protection in case of puncture It's inner tire takes over when outer surface is spiked or slashed Immediate repairs not required.



A FLUSH and a Full House

George Bingham found that time,
effort and ingenuity are the equal of
underwork and a non-expanding shop



MOST small garage operators labor through periods of over-work and under-work. One week they have more business than they can handle. The following week they sit idle and do practically nothing. During busy weeks they wish they had an assistant. The next week they're glad they don't. Add this dilemma to a non-expansive location and you have a real problem. One man we've met had this problem and licked it. Here's his story:

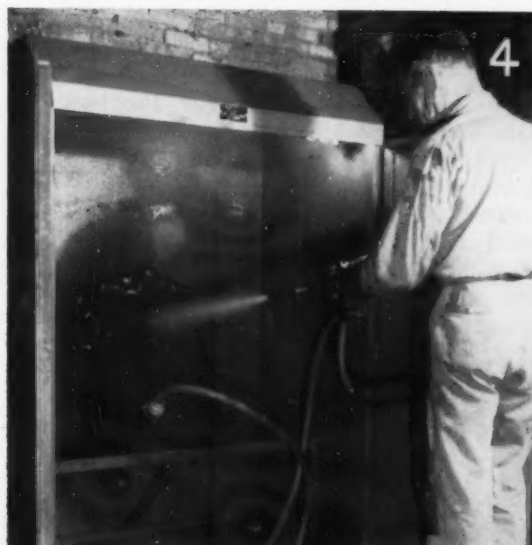
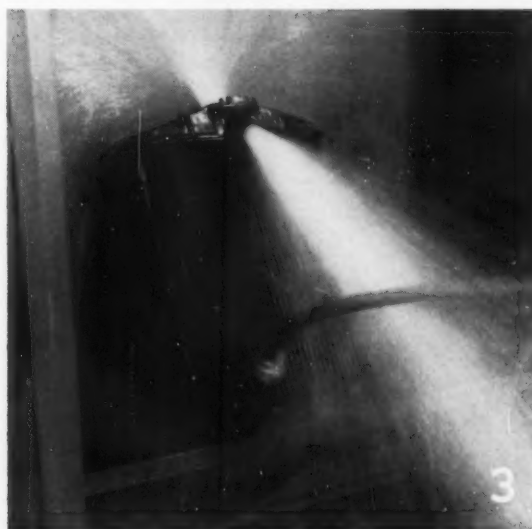
George Bingham operates a small service garage in the residential community of Ridley Park, Pa. His shop has been in operation for many years. Homes and several businesses have risen up around him. The

shop is small, in fact, there's room for only three cars. Outside parking accounts for six more.

On immediate following pages (38 and 39) are photos of how-to-do-it radiator repair.

Like his competitors, George Bingham found himself faced with depressing periods of under-work. He began casting around for an additional automotive service. A survey of surrounding Ridley Park communities revealed car dealerships, service stations—everything but a competitive radiator repair shop. George wasted little time. He purchased a radiator repair assembly, spent his

(Continued on page 72)



Radiator repair shown in ten steps

1 Automatic heater controls on the side of the tank hold the temperature constant. The right-hand control is the thermostatic setting.

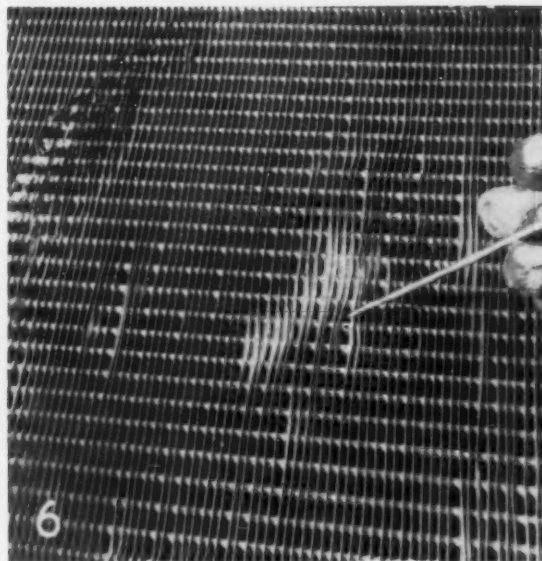
2 The mechanic submerges the plugged radiator in a solution for hot cleaning. He will then clamp the lid and allow the radiator to cook.

3 After hot cleaning, the radiator is placed in a flushing cabinet and air pressure is injected for a thorough internal cleansing.

4 Still in the flushing cabinet, the radiator is submitted to high pressure water in order to remove bugs and dirt embedded in core.

5 Radiator has been submerged just below the water line to detect air leaks. Note the air escaping through small leaks in the core.

6 This close-up view reveals one of several holes to be repaired. The copper cooling fins are easily pushed back for repairs.

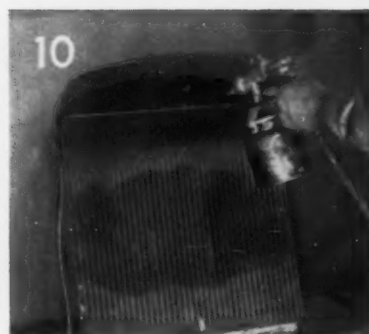
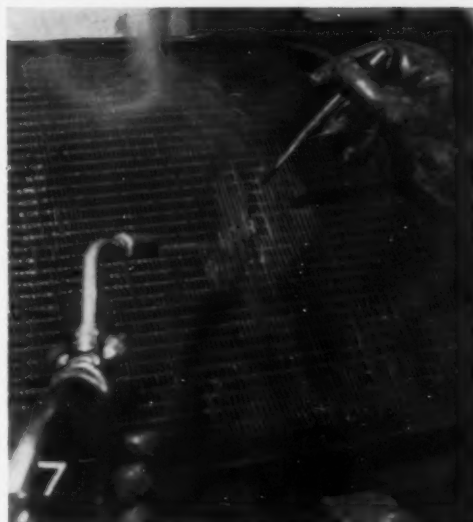


7 Here the fins are opened permitting access to the damaged area. Gas torch heat is applied while the mechanic swabs with liquid flux.

8 Wire solder is used to fill the hole. The radiator is then submerged and again checked with air pressure for leaks.

9 After the leaks have been repaired, the copper cooling fins are straightened with a pair of long nosed pliers.

10 The radiator, now finished, is replaced in the flushing cabinet and sprayed with a special non-insulating black paint.



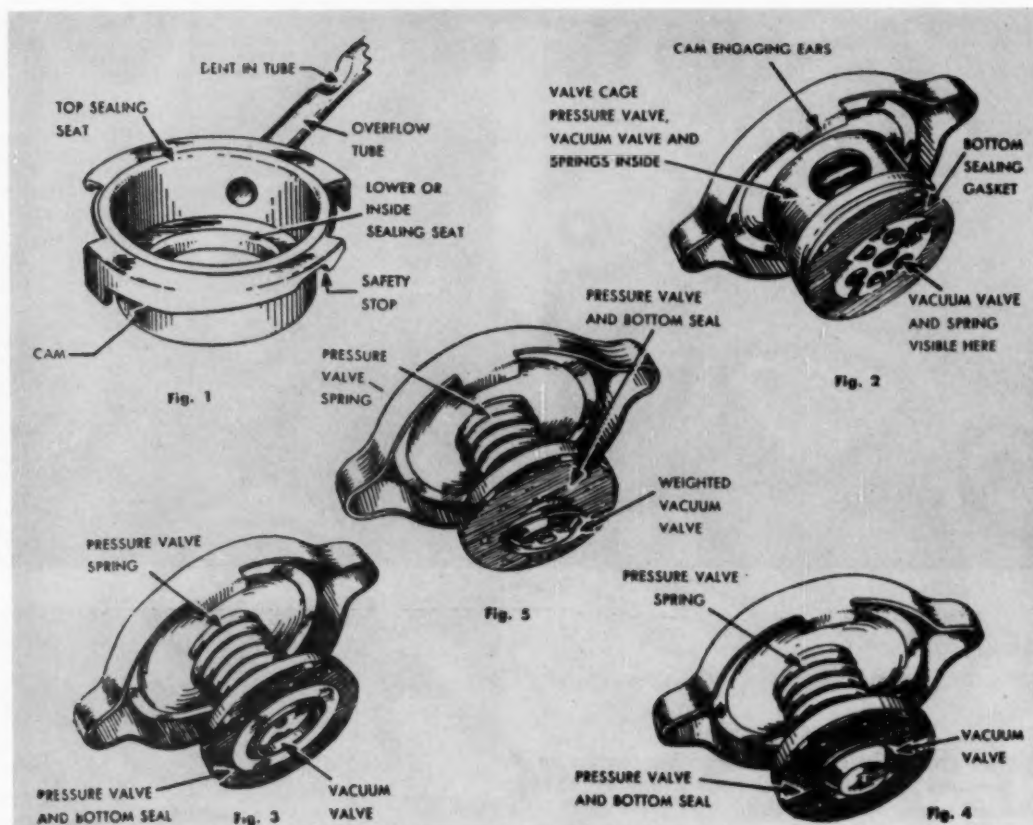


Fig. 1 depicts top and lower seats in radiator's filler neck; figs. 2, 3, 4, and 5 show variety of styles for pressure caps.

Be sure the **PRESSURE CAP WORKS**

COLD weather makes service specialists become more acutely aware of cooling system problems. They see so many of them. The motorist who waited till the last minute for anti-freeze. The car owner who all summer postponed renewing worn radiator hose; who held off on a new pressure cap or thermostat installation.

What was the general rule in the past as to cooling system problems? In the older models with atmospheric (non-pressure)

systems, low horsepower engines, low compression, and less heat volume was the pattern. The vehicles ran pretty well if the systems were clean; in good mechanical condition.

On the other hand, with the coming of the pressurized cooling systems, the answer is not as simple. We all know that pressurized systems came into the spotlight when radiator size was cut down. When higher compression ratios and more horsepower

became the rule of the modern engines. In short extra cooling capacity was needed. Pressurized cooling systems was the answer.

By pressurizing the system, the loss of coolant by evaporation, surging, and boiling was either cut down or eliminated.

Pressurization is done by using a special design filler neck. And the vitally important pressure controlling cap. The filler neck is made with a top sealing seat and a lower inside sealing seat.

The pressure cap is also equipped with a built-in pressure control valve. This valve seals off the cooling system from the overflow tube and the atmosphere. The great advantage here is obvious. The system pressurizes itself as the coolant becomes heated. The greater the heat, the greater the pressure and cooling system efficiency.

The pressure cap functions as a safety valve. It keeps the pressure within desired limits. Some pressure caps operate at four pounds, some at seven. Others go as high as 13 and 14 pounds.

Pressure caps are equipped with a vacuum relief valve which opens automatically when the engine is cooling to prevent a vacuum in the system. (The internal pressure drops below the atmospheric pressure when engine

is in the process stage of giving off heat.)

Testing the Pressure Cap

A number of pressure caps have a pressure valve and spring within a cage or dome-shaped part. A sealing gasket is usually carried on the bottom of the cage to seal against the lower inside sealing seat of the filler neck.

Test the tension of the pressure valve spring by inserting a piece of stiff wire or a nail through the center hole in the bottom. Press inward at the same time. This should disclose a stuck valve. The vacuum valve is also visible through the holes on the underside.

If it can be shifted easily from side to side slightly, and the light spring is holding it in place against the pressure valve, it is working properly.

However, there is a better way to test. A way that is worth the little extra trouble. A way that is safest. The best insurance against "customer come-backs."

Use a pressure tester to check the cap's condition. At the same time, the pressure tester can be used to check on the cooling system of the customer's car.

By this method, worn, leaking hoses are

(Continued on page 88)

Knowing what to quick check on the pressure cap and how the cooling system should be pressure-tested are basic items to alert Servicemen

Pressure tester used to uncover leak; note water spurting from upper hose.





Studebaker's Transtar two-ton model for '58, powered by 289 cu in. V-8 engine.

STUDEBAKER TRUCKS OFFER *FOUR* ENGINES

New Studebaker Transtar line ranges from half-ton pickups to two-ton heavy duty trucks. Optional four-barrel carburetion will widen the power choices

A WIDE range of engines, models and gross vehicle weights highlights the Studebaker line of Transtar trucks for 1958. Major highlights of Studebaker trucks for 1958 include: Powerful engine and high gross vehicle weight; five models in the two-ton medium and heavy-duty series; automatic transmission for the one-ton classification; power steering for the one to two-ton models; power brakes for light-duty model; premium features package for light-duty model engines and large engine for light duty units.

New Truck Line

The new Transtar line for 1958 ranges from half-ton pickups to two-ton heavy duty trucks. Four engines will be offered for

Studebaker trucks in 1958. A 259-cubic inch, 170-horsepower V-8 is offered in the half and three-quarter-ton models and a 289-cubic inch, 182-horsepower V-8 will be used in the heavy-duty units and as optional equipment for the two-ton medium-duty model. This engine also is optional in the one and one-and-a-half-ton models.

Optional four-barrel carburetion will widen power choices available, increasing horsepower to 178 and 192 respectively for the 259-cubic inch and 289-cubic inch V-8 engines. Studebaker-Packard offers two six-cylinder engines available in the light-duty models, the 185 cubic inch, 92-horsepower and the 245-cubic inch, 106-horsepower power plants.

(Continued on page 74)

DODGE HEAVY TRUCKS GET AUTOMATIC SHIFT



Pickup models will carry the option of a 204-hp V-8, or a 120-hp 6 cylinder motor.

The Chrysler member has also extended Torqmatic to its medium-weight models

THE convenience of automatic shifting, an integral part of today's passenger cars and light trucks, is now extended to Dodge's medium and high-tonnage 1958 trucks. Entitled Torqmatic, the shift is a mixture of six forward speeds, reverse and a hill retarder. Dodge is offering the Torqmatic on its D500, 600, 700 and S500, 600, and 700 models with a V-8 engine.

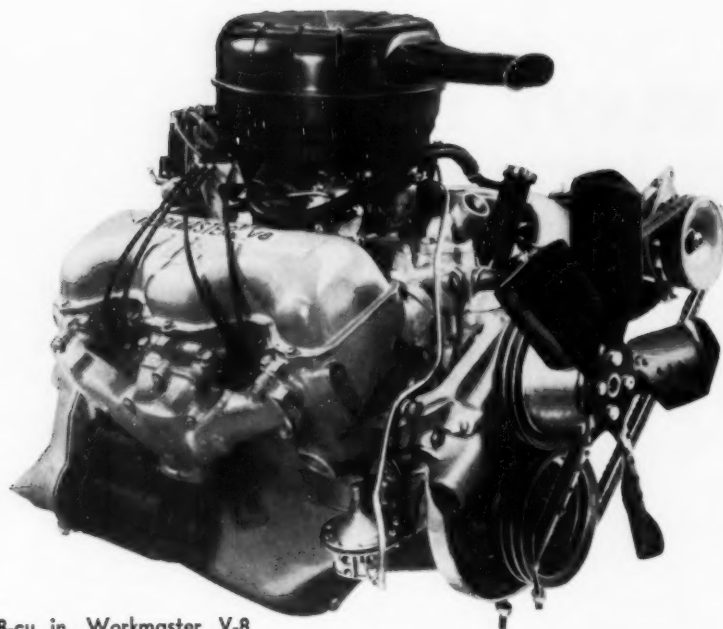
A new engine, a 207 horsepower version colorfully named the "Sugar Power Giant 315," is standard on the C600 cab-over-engine model. The double-rocker-shaft V-8 engine is available on all medium-tonnage

models, except the P400 forward-control chassis.

Four-speed Transmission

Another engine advancement is the four-speed auxillary transmission for 900 models. This transmission features two underdrive ratios, direct drive, and one overdrive ratio. One underdrive ratio is for off-road servicing, while the other is designed for road gear-splitting. Dodge's extra-heavy duty, five-speed, synchro-shift transmission is continued on 900 models and will be available for the 800's.

Overall, the Dodge truck line offers ten different horsepower engines ranging from 113 to 234 horsepower. Push-button driving controls again are available on low-tonnage
(Continued on page 78)



The 348-cu in. Workmaster V-8 engine with pointed pistons.

CHEVY adds 12 new trucks

CHEVROLET for 1958 offers 128 models, 24 different wheel bases and five basic engines. The new trucks feature new styling; new 348-cu in. V-8 engine; a dozen new models; new series numbering system; dual headlamps; a light duty version of the 283-cu in. engine; improved engine fans and optional front axle drive on 4-wheel drive models.

New series designation consists of two numbers—31, 32, 36 and 38 for light duty models; 40, 50 and 60 for medium duty models; 70, 80, 90 and 100 for heavy duty models. Individual models have a four number designation. For example, a new model in the medium duty line with 19,500 lb GVW rating is designated as Model No. 6703H.

New Models

The new models include (1) six 2-ton low-cab-forward and chassis models with a 72-in.

(Continued on page 80)

Complete truck line now lists

128 models with 24 different wheel bases

Chevrolet's forward-control Step-Van.





Ford's tilt cab flanked by the Styleside pickup. Note new grille and dual lights.

FORD TRUCKS offers variety of models

Automobile-inspired styling, consisting of a new grille,
dual headlights and two-tone color, trumpets 1958 models

FORD Motor Company, with what is described as automobile-inspired styling, will send more than 300 truck models into 1958 competition. Models range from the dapper Ranchero to light, medium, heavy, extra heavy and tandem trucks.

Ford's automobile styling is reflected in the adoption of dual headlights and a cross-hatch grille. The dual lights will be standard on conventional and tilt-cab trucks. A further automobile flavor—two-tone color combinations have found their way to most models.

After the first of the year, Ford will have three new engines for models of 30,000

lb. gross vehicle weight and up. Displacements will be 410, 477 and 534-cu. in. Currently, light duty trucks will benefit from the horsepower boost given to Ford's 272-cu. in. V-8 engine, now rated at 181 hp and 440 rpm. A heavy-duty version is offered at 178 horsepower and 3800 rpm.

Engine Durability

Ford engineers claim that engine durability has been hiked by modification of crankshafts, pistons, valves and camshafts. Engine efficiency was also increased by a new carburetor, higher-capacity water pump, and

(Continued on page 82)

NEW V-8 ENGINE FOR GMC TRUCKS

New grille, dual headlights and a new model will make their 1958 bow

THE 1958 model GMC light and medium duty trucks have been introduced. The new line of GMCs features dual headlamps, new grille, hood and fenders and new V-8 engine. One new model has been introduced which ranges from half-ton units on up to highway tractors capable of hauling 90,000 lbs gross combination weight. It is a package delivery chassis of 16,000 lbs gross vehicle a new companion for the 7,000 lb and 10,000 lb GVW package delivery models.

Torqmatic Transmission

A new transmission, the Allison Torqmatic has been placed in the new GMC models 370 and up through the 600, which cover weight ranges from 32,000 to 55,000 lbs GCW. The Torqmatic, succeeding the Hydra-Matic for these models, is basically a torque converter in series with a planetary gear train operated through a hydraulic control system. The Hydra-Matic transmission is remaining on the one-half through 2-ton GMC models.

A new GMC 336 cubic inch V-8 gasoline engine heads up a group of 9 gas and Diesel engines used through the GMC line. A valve-in-head 90 degree V-type, it develops 200 gross horsepower at 4400 RPM and a gross torque of 307 pounds-feet at 2,000 to 2,400 RPM. It has a compression ratio of 7.5 to 1.



GMC pickup model displays new front look.



The new 336-cu in. V-8 model with 200 hp.

The 336 engine, available in all models up through the 500 series, has a unit-cast cylinder block and upper crankcase of nickel chromium alloy cast iron.

Full-length water jackets surround each cylinder for proper cooling, and the 64½-pound crankshaft is drop-forged from heat-treated steel. Tin-plated, cam-ground aluminum pistons combine light weight fast heat conductivity and controlled expansion without permitting excessive inertia loads on bearings.

A new four-lamp system, the company claims, gives better control of light, particularly in the low beam, greater low beam see-

(Continued on page 76)



"We'll have to make it higher, too!"

Presenting a table of comparative
data on the high horsepower V-8
engines of 1958 cars compiled by
engineering editor Joseph Geschelin

HORSEPOWER,

ANALYSIS of V-8 engines, offered in '58 passenger cars shows a mixture of entirely new engines, as well as a few examples where displacement has remained unchanged. Generally speaking, horsepower and torque increased on most of the engines. This indicates that most passenger car producers have not yet reached the end of high performance ratings.

This year will go down as the year of induction systems. Engines are equipped with two-barrel carburetors, four-barrel carburetors, six-barrel carburetors, eight-barrel carburetors, fuel injection systems, and fuel injection with racing camshafts as in the case of the Corvette. This variety of fuel handling systems has brought about a change in engine performance characteristics for engines of the same displacement. A number of passenger car producers offer from six to seven or eight engine packages, using only three or four basic engines.

Engine Specifications

Because of such compounding of engine specifications, the present analysis has been restricted to engine options having the maximum Bhp/cu.in. ratio. Where a given make has an engine which is fitted with two- and four-barrel carburetors, the table will show only the one with a four-barrel carburetor. In the few instances where an engine is using only a two-barrel carburetor, the reasons for this choice is (One) Limitation of space. (Two) Rating engines in a descending order of Bhp/cu.in. ratios makes for a better comparison of engine potential.

1958 also ushers an era of big engines.

Cylinder bores now reach up to four-inches in diameter and displacement has exceeded 400 cu.in. on several engines. For example, Lincoln and Mercury have engines of 430 cu.in. displacement; the Edsel has one of 410 cu.in. displacement; while the Chrysler 392 cu.in. engine is very close to the 400 cu.in. figure. Moreover, top speeds for some engines—particularly those with fuel injection now are up in the vicinity of 5000 rpm.

It may be well at this point to talk about horsepower ratings. The trend to increasingly higher ratings has been criticized for some time. Why are ratings still higher? Actually, there is a good reason for this, and it is not because car producers are aiming at higher road speeds. The fact of the matter is that the engine is being called upon to supply an ever increasing number of power-consuming devices. First, there is the increased load due to dual headlamps as well as other electric and electronic devices for operating power seats, windows, tops, etc. Correspondingly larger generators are employed and these constitute a heavier drain of engine power.

But that is only part of the story. Air conditioning installations are increasing. These require a special compressor. Starting this year, a large percentage of cars will be built with air ride. This requires installation of an air compressor. In addition, most cars have power steering and that requires a hydraulic pump. Besides this, most cars specify automatic transmissions and these have hydraulic pumps that are in the power-consuming circuit all the time. By the time all of the accessory load is accounted for, the net

TORQUE RATINGS for

'58

output of a given engine is reduced very considerably below its advertised rating.

If engine ratings were not upped, performance from the standpoint of acceleration and safe passing ability would be impaired.

Referring to the tabulation, there are four engines that top the field in maximum horsepower rating: Lincoln and Mercury are rated at 400-bhp, with a 6-barrel carburetor

(Continued on page 88)

COMPARATIVE DATA . . . 1958 OHV V-8 PASSENGER CAR ENGINES

	BHP (max)	Displacement (cu in.)	Ratio Bhp/cu in.	Torque (lb ft)	Compression Ratio	Bore/Stroke Ratio	Ratio Torque/cu in.
1. Chevrolet Corvette (F)	290	283	1.024	290	10.5	1.29	1.024
2. Chrysler 300C (B)	390	392	0.994	435	10	1.02	1.109
3. Chrysler 300C (G)	380	392	0.969	435	10	1.02	1.109
4. Golden Hawk (E)	275	289	0.951	333	7.8	0.98	1.152
5. Lincoln and Mercury (A)	400	430	0.930	480	10.5	1.16	1.116
6. Dodge D-500 (B)	333	361	0.922	400	10	1.21	1.108
7. Cadillac-Eldorado (A)	335	365	0.917	405	10.25	1.10	1.109
8. Plymouth Fury (D)	290	318	0.912	330	9.25	1.18	1.037
9. Plymouth (B)	315	350	0.900	370	10	1.20	1.057
10. Chevrolet (B)	250	283	0.883	305	9.5	1.29	1.077
11. Imperial-New Yorker	345	392	0.880	450	10	1.02	1.147
12. Chrysler Saratoga	310	354	0.875	405	10	1.08	1.144
13. Lincoln and Continental	375	430	0.872	490	10.5	1.16	1.139
14. Plymouth (G)	305	350	0.871	370	10	1.20	1.057
15. Mercury	330	383	0.861	425	10.5	1.30	1.109
16. Rambler Rebel	215	250	0.860	260	8.7	1.07	1.040
17. Ambassador	270	327	0.856	360	9.7	1.23	1.100
18. Ford	300	352	0.852	395	10.2	1.14	1.122
19. Cadillac	310	365	0.849	405	10.25	1.10	1.109
20. De Soto Fireflite	305	361	0.844	400	10	1.21	1.108
21. Dodge D-500	305	361	0.844	400	10	1.21	1.108
22. DeSoto Firesweep	295	350	0.842	385	10	1.20	1.100
23. Dodge	295	350	0.842	385	10	1.20	1.100
24. Edsel	345	410	0.841	475	10.5	1.13	1.158
25. Oldsmobile (A)	312	371	0.840	415	10	1.03	1.118
26. Edsel	303	361	0.839	400	10.5	1.15	1.108
27. Pontiac (B)	310	370	0.838	400	10.5	1.14	1.081
28. Buick	300	364	0.824	400	10	1.21	1.099
29. Oldsmobile	305	371	0.822	405	10	1.03	1.091
30. Dodge Royal	265	325	0.815	355	9	0.97	1.092
31. Pontiac (A)	300	370	0.810	400	10.5	1.14	1.081
32. Chevrolet (A)	280	348	0.804	355	9.5	1.26	1.020
33. Dodge D-500 (G)	320	361	0.803	400	10	1.21	1.108
34. Ford	265	332	0.798	360	9.5	1.21	1.063
35. Plymouth	250	318	0.785	340	9	1.18	1.069
36. President	225	289	0.779	305	8.3	0.98	1.055
37. Pontiac	285	370	0.770	395	10	1.14	1.067
38. Studebaker Commander	195	259	0.753	260	8.3	1.10	1.023

NOTES: (A) Three, two-barrel (six-barrel) carburetor package.
 (B) Fuel Injection system.
 (E) McCulloch Supercharger installation.
 (F) Fuel injection with special camshaft package.
 (G) Two, four-barrel carburetor package.



Ray Scott

Philadelphia, a patriarch of formality, threw open its Convention Hall last month and graciously embraced the glittering world premiere of the 1958 Automobile Show. New York's world-famous hostess, Elsa Maxwell, and MC Ray Scott, president of the Phila. Automobile Trade Assn., welcomed the multitude of formal-attired visitors. A begoggled Elsa arrived in a 1907 Maxwell and was interviewed by show committee member John B. White. Even ancient Ben Franklin turned out to glimpse the smart American and foreign models.

PHILLY SHOW Welcomes 125,000

New American and foreign automobiles displayed before formal audience in sparkling first-night world premiere

Julie Driscoll

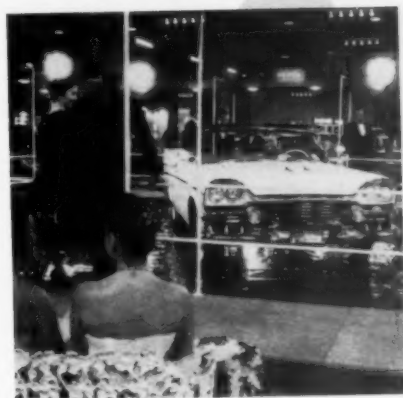
Ray Scott

Elsa





Elsa and
John B. White



Ben Franklin



Sitting Pretty

Service Man's Idea Book

'Old' but not Forgotten

Several "Idea Book" awards go out this month. The first to Stan Clark in East Bradenton, Fla. Writes Stan: "We use every method we know to attract new customers, but have found it of utmost importance to keep our 'regulars' coming back." He adds that it is human nature to expend courtesy and service to impress the brand-new customer and a temptation to take the "regulars" for granted.

Stan's service center has adopted the policy that "the longer a customer has been with us, the more important he is." An old customer is a walking advertisement. He carries the word of good service and reasonable prices to friends and relatives. Don't overlook the "regular."



Above is window display featured recently by V. E. Wisniewski at his parts supply store in Milwaukee. Wisniewski's display featured Ford Model T parts. His store specializes in supplying older model parts

Service Known thru Movies

The second award this month was hauled in by Dave Hardesty, service manager for Ralph Pritts and Sons in Oakland, Md. Dave notes that the Ralph Pritts Dodge-Plymouth agency makes use of the movie theater screen practically all year round.

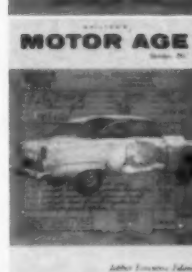
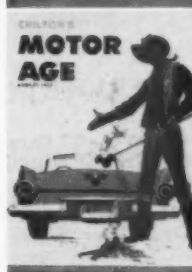
Quick, interesting service and sales pitches are thrown on the town's main movie house screen in Oakland. In the summer, the messages are also shown at intermissions at the local drive-in. Oakland is in the heart of the Deep Creek Lake area of western Maryland.

Two Patterns in Auto Sales

A "massive upgrading" of the automobile market and a year-round auto business free for the most part from seasonal ups and downs were cited as two patterns in the industry recently. In a talk before the American Finance Conference, Byron J. Nichols, general manager of automotive group marketing for Chrysler, said: "The trend toward 'more automobile' is the dominant trend in the market today. The roomy, comfortable all-purpose American car . . . will retain its present place of overwhelming popularity."

Secondly, Nichols saw a trend towards the leveling off of peaks and valleys in the automobile market. "In the pre-war years the third quarter sagged definitely below the second quarter. But in the post-war years the third quarter has strengthened and tended to approximate the levels of the second quarter."

Nichols sees three events helping to set up this picture. 1) The development of the all-season closed car. 2) The switch of new car introductions from January to the Fall. 3) Increased emphasis on third quarter selling.



MOTOR AGE

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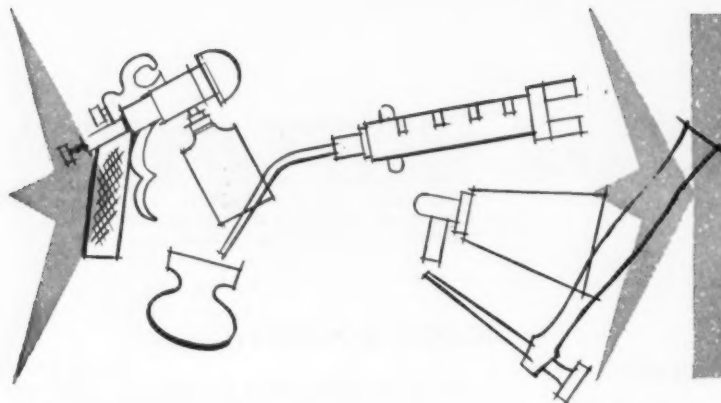
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BODY SHOP TIPS

BODY SHOP TIPS are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Rubber Scraper Makes Tool For Stirring Paints

When a kitchen rubber scraper is discarded, store it in the work shop or garage with paint supplies. It makes a fine tool for stirring paints and other liquids used in the work shop. Much better than using brushes for transferring paint from one container to another. *E. A. Stowell, 515 E. Oak St., Boscobel, Wis.*

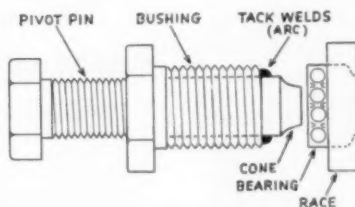
Tip on Removing Vent Window Glass

Sometime ago I saw in your Body Shop Tip section a tip on replacing vent windows. It advised heating of vent frame for easy glass removal. I'd like to add something to that tip. Put

three or four strips of masking tape on each side of glass near open edge. Then snap a pair of vise grip pliers on. This gives you a good grip on the glass and will not crush or break glass. *Bud Teske, Spencer Motors, 111 North St., Waukesha, Wis.*

How To Make A Handy Body Jack

When space doesn't permit use of small body jack or spreader attachment, an efficient jack screw can be quickly made from various items found

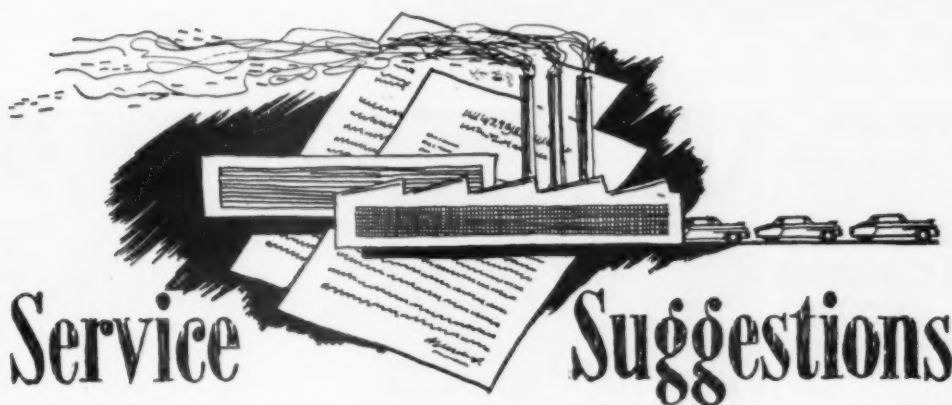


around the shop. They are a lower pivot pin and bushing from an "A" frame front suspension and an outer front wheel bearing assembly. Tack weld cone of bearing on end of bushing opposite shouldered end. Assemble bearing and jack screw in threaded pin gives an adjustment of approximately 2 1/4 inches. *Dean Tarkington, Mancuso Motors Inc., Body Department, Batavia, N. Y.*

Painting Wheels Without Removing The Tires

Take a piece of tin 26 inches square. Put a 17 inch wheel on the tin and mark the inside circle. Cut it out and then make the outside round, leaving the piece 5 inches across. Then cut the piece in two. Next you wrap it around a 15 inch wheel and weld it together. Put a flange on the inside of it and about 1 1/2 inch, pointing it toward the tire so it will go inside the bead on the wheel. Put strap iron on two sides in the form of a hook and put two spring steel bands (such as a clock spring) on the other side. This will help you snap it on the wheel so you can paint. This is for a 15 inch wheel. The same can be done to make one for a 14 inch wheel by using a 16 inch wheel to start with, instead of a 17 inch wheel. *Ralph J. Hill, Foreman, Mace Motors, Inc., Canton, N. Y.*





Service Suggestions

How To Remove Engine Oil Pan

Engine oil pan removal and installation is somewhat difficult on early production 1957 Mercurys equipped with a front engine steady rest support.

The following procedure has been established to remove and install the oil pan on these vehicles.

1. Turn crankshaft to position the No. 1 piston 12 degrees A.T.D.C.
2. Raise vehicle on hoist. Drain engine oil.
3. Remove radiator splash shield.
4. Remove stabilizer bar mounting bolts.
5. Vehicles equipped with automatic transmission.
 - a. Remove oil pan cap screw securing transmission cooler line clip to block.
 - b. Loosen transmission oil cooler outlet pipe at lower left-hand side of radiator and right-hand side of transmission case.
6. Remove engine steady rest mounting bolt that secures steady rest to bracket on frame front crossmember.
7. Remove nuts and retainers from front engine supports.
8. Remove two bolts securing rear engine support to frame crossmember.
9. Remove cap screws secur-

ing oil pan to cylinder block.

10. Raise front of engine approximately 4½ inches.

Caution: Do not raise engine more than required amount to remove oil pan.

11. Drop front of oil pan down, position stabilizer bar between oil pan and cylinder block.

12. Carefully remove oil pan assembly.

To install oil pan assembly, reverse removal procedure.

Removing Glycol Contamination From Oil System

If Glycol (permanent anti-freeze) contamination is present in an engine oiling system it should not be removed until the cause of the leakage is found and corrected. The following steps, if closely adhered to, will effectively remove all Glycol contamination.

(1) Drain out all oil and remove the oil filter; fill the crankcase with a mixture of about 3 qts of SAE 10/W oil and 2 qts of Butyl Cellosolve (obtainable from chemical suppliers); idle the engine for 30 min. noting the oil pressure; immediately drain the solution from the crankcase.

(2) Add a flushing solution of about 3 qts of SAE 10/W oil and 2 qts of kerosene; circulate the mixture at idling speed for 5 minutes; completely drain the system.

(3) Install a new oil filter element and add fresh oil of the grade and classification required.

Fuel Injection Starting Procedures

Due to the revised fuel and air control arrangement used on Chevrolet's Fuel Injection as compared to carburetor air-fuel control, the procedure for restarting a warmed-up engine is different than was required for carburetor equipped engines.

To restart a Fuel Injection equipped car while the engine is still warm, depress the accelerator to the floor and hold in this position while cranking with the starter until the engine starts. By this means, a minimum amount of fuel is added by shutting off the starting bypass fuel line while the maximum amount of air is admitted by fully opening the throttle valve in the air meter.

Cold starting procedures for Fuel Injection equipped engines are identical to those of automatic choke carburetor equipped engines. Depress the accelerator pedal to the floor to index the fast idle cam, then fully release. Crank engine until it starts. Indexing the fast idle mechanism provides the higher engine idle speed necessary during warm-up.

**READERS'
CLEARING
HOUSE**

TROUBLE SHOOTING



Having Trouble With Sluggish Brake Pedal

One of our customers is having trouble with his brake pedal being sluggish in returning on cold days. This car is a 1953 Buick equipped with power brakes. I have checked the adjustments etc. and everything seems to be in order.

Dans Auto Service
Roslyn, Pa.

IT occurs to me that the trouble probably is in the power cylinder, it may need lubricating. I would suggest taking the unit

apart to carefully check the power cylinder bore and piston. The bore should be smooth and free from burrs. Then seals should be lubricated with hydraulic brake fluid and reassembled.

Hard to Start '51 Olds When It Is Hot

I have a 1951 Oldsmobile and when it is hot it doesn't start. I have done a valve job, put in new lifters and rebuilt the carburetor which is a four-barrel one off a '52 Olds. I have put a

new starter on and I have gone over the ignition system. When it is cold it starts fine, but when it gets hot the starter draws a lot of current out of the battery while trying to turn the motor over and then there isn't enough spark. I have used a 12-volt battery which kicks it over and starts it fast. If the car is pushed, it starts right up. I thought it might be a warped flywheel. I have been planning to tear the motor down because it needs rings. I think they may be cracked. When the motor is racing, oil is blown out the breather. The car has an automatic transmission.

David J. Garland
Pat's Service Station
Fairport, New York

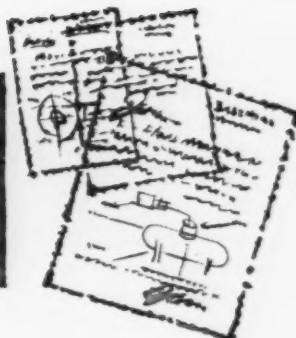
I HAVE seen quite a few Oldsmobiles giving the same trouble and it always goes back to the starter. I would suggest checking the ignition timing to make sure it is not advanced too far, also make sure all the electrical connections are clean and tight. Sometimes the problem can be licked by reworking the starter brushes. Remove the starter and file each brush to a point. Try this and see how it works. As for the oil leak, I am

FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S

PROBLEMS



By Jack Montgomery
Technical Editor



quite sure the rings are worn, causing the engine to have a lot of blow-by.

1956 Ford Pulls To Left When Brakes Are Applied

I am having trouble with a 1956 Ford Victoria. Every time the brakes are applied the car pulls to the left. I have had the front end completely overhauled and aligned. I've also replaced the lining three times on both front wheels; had the lining radius ground to the drums; replaced both front wheel cylinders; repacked and adjusted the front wheel bearings; bleed and rebleed the brake system. I have power brakes on the car so I disconnected the power unit. The same condition exists. I've had mechanical experts look at the car and they have all said that one of the above mentioned items is the cause. I have double checked all the above items with no results. This has been going on for a six month period.

Eugene Mateus

*c/o Tom's Amoco Service
Clinton, New Jersey*

I HEARD of similar experience on these brakes and they were corrected by either replac-

ing both front hoses or doing what you have done already. You might try filing the brake shoes where they contact the top anchor. Best results are obtained by using a quarter to check the shoes contour at the top anchor. File the curve until the quarter just lays in it. I also ran into a case where the brake line fitting was restricted, it was not drilled properly. I would suggest checking all the brake lines for restrictions.

Wants Advice On Balky Engine

We have a 1955 Chevrolet V8 that has a peculiar miss and spits once in a while. I have tuned it up and have gone over the carburetor. Can you give me any information on this problem?

*Car Conditioning Company
Phila., Pa.*

IF the compression is good and it idles smoothly, the condition might be due to cross firing. This sometimes happens when the high tension current is flowing through the ignition cable on its way from the distributor to the spark plug. It may induce voltage in another plug wire im-

mediately next to it, especially when the two wires run parallel to each other for some distance. This voltage may cause a spark plug to fire out of sequence resulting in a miss or spit back. Cross firing is most likely to occur between the two rear cylinders in the left bank, which immediately follows each other in order of fire. The remedy for this condition is to reroute the spark plug wires so that No. 5 and No. 7 wire are not next to each other. Run the wires through the holders with 5 on one side and 7 on the other. Also make sure the plug gaps are set to specifications.



MOTOR AGE FLAT RATE AND SERVICE MANUAL

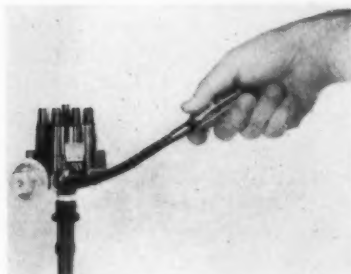
NEW PRODUCTS

SHOW

WINDOW

Adjustment Tool

A new E-Z Reach tool, over 18 inches long, has been offered for use on all external adjust-



ment distributors. As claimed by the manufacturer, the new tool can be used to adjust distributors with dual or triple carburation and air conditioning. It is said to be engineered to eliminate troublesome wrap-up and back-lash. Write: *United Motors System, Delco - Remy (M.A.), Detroit 2, Michigan.*

Cushion Toppers

A new seat cushion topper that can be installed and removed in minutes is available for 1957 Chrysler and Imperial cars, including Plymouth, Dodge and DeSoto. It is also reported available for older cars. According to the manufacturer, the seat jackets are full-fashioned for both front and rear seats and are free from annoying clothing drag. A latex foam rubber padding reputedly insures a perfect fit. It is said the toppers can be

sponged clean while remaining on the seat and require no special tools for installation or removal. The jackets are reported available in gray, black, blue, green or maroon. Write: *MoPar Division, Chrysler Motors Corp. (M.A.), P. O. Box 1718, Detroit 31.*

Exhaust System Sealer

A new compound that permanently seals exhaust system connections against gas leakage and noise has been developed. The company claims the compound



was developed to stop acoustical leakage of high velocity exhaust gases. It is said the self-drying compound will seal marred connections between mufflers and pipes. It will also allegedly prevent rusting of connections. Write: *Walker Mfg. Co. (M.A.), Racine, Wis.*

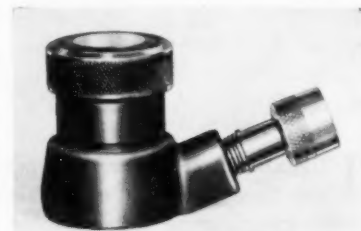
Welding Booths

Compact welding booths, de-

signed to overcome the hazards of both toxic gases and arc flashes, have been announced by the producer. It is claimed the booths feature high velocity suction, and durable steel side extensions. Reportedly, booth sizes range in height, 30-in. to 42-in., width, 30-in. to 60-in., and a depth of 28-in. to 36-in. Appropriate blowers, it is said, are available with air-movement power of 400 to 1650-cu ft per min. Write: *Engwald Corp. (M.A.), 125 Sheridan Blvd., Inwood, L. I.*

New Short Ram

A new short ram has been designed for inaccessible areas. It is said the Ram's closed height is 2 $\frac{3}{8}$ -in. It will reputedly move a full inch. According to the manufacturer, the Ram will fit 2, 3, 4 and 7 $\frac{1}{2}$ -ton jacks with quick detach couplers. Coupling is allegedly offset for positioning

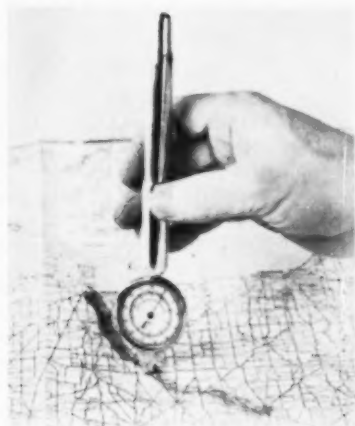


and to prevent hose damage. It is claimed the Ram worked well on swept-back fins; also '58 Buick front ends, and straight

box frames. Write: *H. K. Porter, Inc., Automotive Division (M.A.), Somerville, Mass.*

Route, Mileage Marker

A transparent route marker



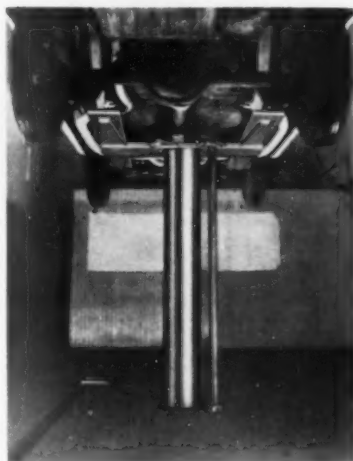
and attached mileage computer is offered for map computation. It is said the computer converts inches to miles with the map legend. The computer's gauge can allegedly be used for Canadian or European maps. The reverse side reportedly features a compass. Refilling the route marker, it is claimed, is similar to refilling a lighter. Write: *DRI-FLO Mfg. Co. (M.A.), 410 E. Fifth St., Royal Oak, Mich.*

Polishing Cloth

An all-purpose, heavy duty polishing cloth available in transparent plastic has been announced by the manufacturer. The cloth is available in 1½ lb bags and is packaged in 3-lb six-pack, self-merchandising cartons. According to the producer, the cloth is extra-soft and absorbent for polishing cars and glass. Made of lint-free, white material, the cloth is tubular-formed in continuous double-running yardage and, it is claimed, can be cut to desired lengths or washed for reuse. Write: *Atlas Textile Co. (M.A.), 1615 Woodland Ave., Cleveland 15, Ohio.*

New Frame Lift

A new frame lift has been developed that raises from both lengthwise and crosswise positions. It is claimed it will support most all American and foreign cars. The lift, named H-Master Turn-About, allegedly has a non-rotating device and safety latch that automatically locks it in position. It is said to be equipped with 70-in. rails and designed for a wheelbase of 98.5-in. or longer. This includes bowed frame models without adapters. The company claims smaller cars can be rotated 90-deg. Eight models are reportedly available with full-hydraulic air, semi-hydraulic air, or full-hy-



draulic electric operation. Write: *The Joyce-Cridland Co. (M.A.), 2027 E. 1st St., Dayton 3, Ohio.*

Replacement Lenses

A new line of automobile replacement plastic lenses for dealers and service station operators has been announced. It is claimed the lenses are available in red and clear for passenger cars and trucks, and will coincide with original manufacturer specifications. Red lenses for stop and tail lights are reportedly stocked for 1957 Plymouth, Dodge, Chevrolet, Ford, Buick and Pontiac models. Clear lenses for parking, back-up and directional lights are also available.

Write: *ALCO Division, Auto Lamp Manufacturing Co. (M.A.), 2909 Indiana Ave., Chicago 16.*

Power Timing Light

A new AC power-timing light has been introduced, capable of checking 6, 12, 24 and 48 volts and magneto. It is said the light offers a new cooling circuit that will not burn out after hours of operation. According to the manufacturer, a narrow beam that pinpoints the timing mark is supplied by a long-burning lamp. The light reportedly requires two connections and a 110 volt power source. Write: *Herbrand Tools (M.A.), Fremont, Ohio.*

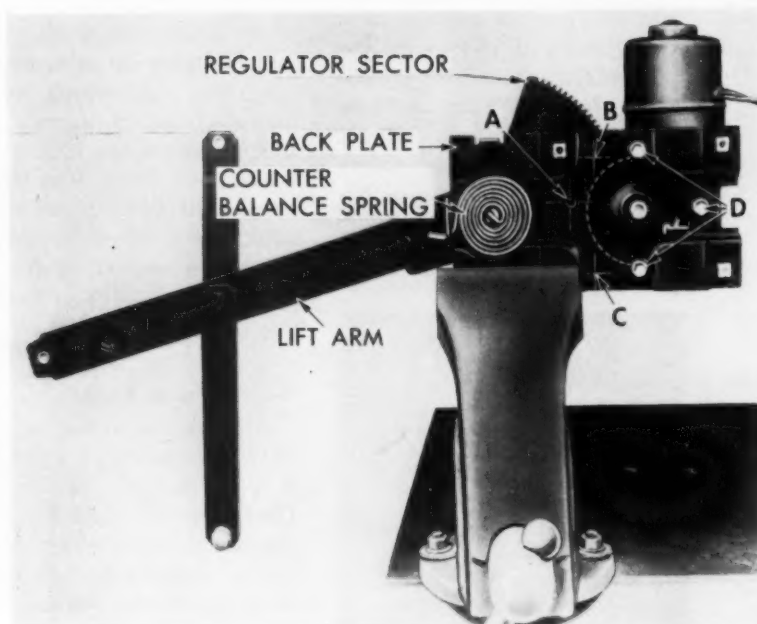
Test Bench Unit

A new generator-regulator test bench has been announced. It is said the unit will test 6 and 12-volt car and light truck generators at speeds up to 600 watts. Reportedly, generators without matching regulators can be tested, as well as double-contact regulators. It is claimed the unit offers forced air cooling, illuminated meters, a generator vise, and a simplified test-lead



hookup. Write: *Allen Electric and Equipment Co. (M.A.), Kalamazoo, Mich.*

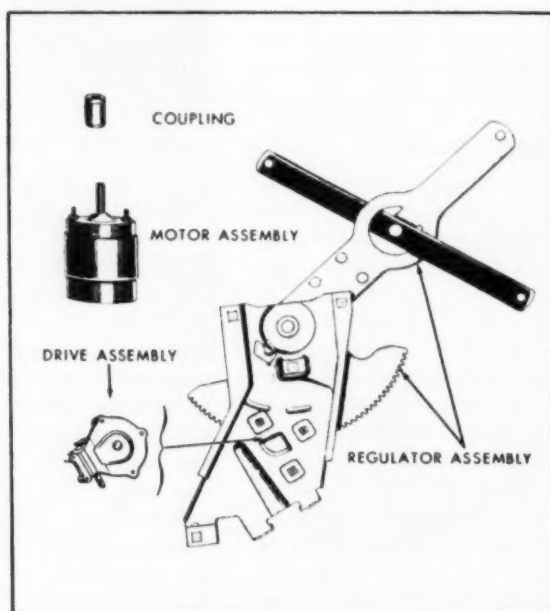
UP TO DATE TROUBLE SHOOTING



Buick window lift. Letters A, B and C indicate where lift arm is pinned while removing motor. [Fig. 1]

Below is a view of Lincoln's type B lift with rubber coupling. [Fig. 2]

TO remove door window regulator in General Motors cars observe this procedure: Lower the window and disconnect the battery, then remove the garnish moulding and inside door handle. Pry the trim panel away from the door, disconnect the wires or terminal block from the control switch and remove the trim panel. Remove the access hole covers from the inner door panel and take out the lower sash channel cam screws, then raise the glass and support it in the upper position. Disconnect the wiring harness from the regulator motor. (On front doors remove the ventilator division channel lower adjusting stud and nut.) Remove the inner panel cam attaching screws,



ELECTRIC WINDOW LIFTS

The causes of electric window failure can be as complicated as a mystery story. But you don't have to be a Sherlock Holmes to find the solutions. Let these MOTOR AGE hints guide you. . . . By Leo A. Mealey, Jr.

TROUBLE SHOOTING

Trouble:

Windows will not operate from master switch but can be operated by individual control switches.

Possible Cause:

1. Defective switch in master switch.

Trouble:

Window will not operate from either master or individual control switch.

Possible Cause:

1. Burned out motor. 2. Defective circuit breakers. 3. Broken control wires. 4. Break in wire from starter solenoid to circuit breaker.

Trouble:

Window operates in one direction only from either master or individual control switch.

Possible Cause:

1. Defective switch. 2. Burned out motor.

3. Broken control wire.

Trouble:

Circuit breaker "clicks" but window does not operate.

Possible Cause:

1. Control wire grounded. 2. Defective switch. 3. Electrical short circuit. 4. Window misaligned.

Trouble:

Window operates in wrong direction from either master or individual control switch.

Possible Cause:

1. Lead wires connected wrong on switch. 2. Motor wires reversed.

Trouble:

Window rises slowly and lowers rapidly.

Possible Cause:

- Broken counter-balance spring on regulator.

detach the cam from the regulator arm and remove the cam from the door. Remove the window regulator to door attaching screws and carefully work the regulator assembly out through the rear access hole.

Replace Regulator Motor

Caution: The regulator lift arm, which is under tension from the count-
(Continued on page 84)

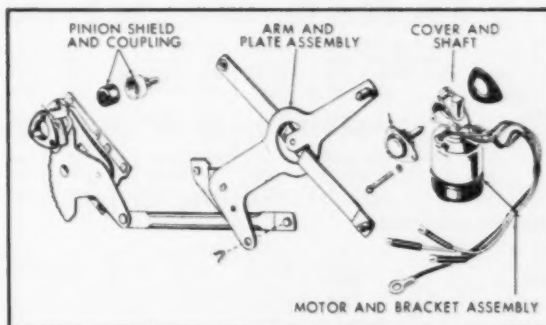


Fig. 3: An exploded view of Lincoln's Type A lift.

1958 Tune-up—Alignment Specifications

MAKE AND MODEL	ENGINE		TUNE-UP DATA										FRONT END ALIGNMENT			
	No. of Cylinders Bore and Stroke (In.)	H.P.	Spark Plug Make and Size (mm)	VALVES				IGNITION				Steering Axis Inclination (Deg.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	
				Seat Angle		Operating Tappet Clearance		Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Spark Occurs ° T. C.					
				Inlet (Deg.)	Exhaust (Deg.)	Inlet (In.)	Exhaust (In.)									
AMERICAN MOTORS CORP.																
Metropolitan	4-561, 562	4-27 $\frac{1}{2}$ x3 $\frac{1}{2}$	52	Ch-14	45	45	.015HC	.015HC	.015	30	.024	11B	8 $\frac{1}{2}$	2P to 3P	$\frac{1}{2}$ P to 1 $\frac{1}{2}$ P	0 to $\frac{1}{4}$
Rambler	8-5610 8-5620 8-5680	8-3 $\frac{1}{2}$ x4 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4x3 $\frac{1}{2}$	127 215 270	CA-14 CA-14 CA-14	45 30 45	45 45 45	.012H .012H Hyd	.016H .014H Hyd	.016 .016 .016	32 30 30	.035 .035 .035	5B 5B 5B	6 $\frac{11}{16}$ 6 $\frac{11}{16}$ 6 $\frac{11}{16}$	0 to $\frac{1}{2}$ P 0 to $\frac{1}{2}$ P 0 to $\frac{1}{2}$ P	$\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
CHRYSLER CORP.																
Chrysler	8-LC1-L 8-LC2-M 8-LC3-H 8-LC3-S	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4x3 $\frac{1}{2}$ 8-4x3 $\frac{1}{2}$	290 310 345 380	AL-14 AL-14 AL-14 AL-14	45 30 45 45	45 45 45 45	Hyd Hyd Hyd .015H	Hyd Hyd Hyd .024H	.017 .017 .017 .017	30 30 30 38	.035 .035 .035 .035	8B 6B 6B 6B	6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$	0 to 1 $\frac{1}{2}$ N $\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P	0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ²	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
De Soto	8-LS1-L 8-LS2-M 8-LS3-H 8-LS3-S	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	280 295 305 345	AL-14 AL-14 AL-14 AL-14	45 45 45 45	45 45 45 45	Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd	.017 .017 .017 .017	30 30 30 38	.035 .035 .035 .035	8B 6B 6B 6B	6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$	0 to 1 $\frac{1}{2}$ N 0 to 1 $\frac{1}{2}$ N 0 to 1 $\frac{1}{2}$ N 0 to 1 $\frac{1}{2}$ N	0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ²	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
Dodge	8-LD1-L1, LD1-L2 8-LD2-L1, LD2-L2 8-LD2-M 8-LD3-L, LD3-H 8-LD2 & LD3, D-500 Package	8-3 $\frac{1}{2}$ x4 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	138 252 265 295 305	AL-14 AL-14 AL-14 AL-14 AL-14	45 45 45 45 45	45 45 45 45 45	.010H Hyd Hyd Hyd Hyd	.010H Hyd Hyd Hyd Hyd	.020 .019 .019 .019 .019	39 30 30 30 30	.035 .035 .035 .035 .035	2B 6B 6B 6B 6B	6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$	0 to $\frac{1}{2}$ P 0 to $\frac{1}{2}$ P 0 to $\frac{1}{2}$ P 0 to $\frac{1}{2}$ P 0 to $\frac{1}{2}$ P	0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ²	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
Imperial	8-LY1-L, LY1-M, LY1-H	8-4x3 $\frac{1}{2}$	345	AL-14	45	45	Hyd	Hyd	.017	38	.035	6B	6 $\frac{1}{2}$	0 to 1 $\frac{1}{2}$ P	0 to $\frac{1}{2}$ P ²	$\frac{1}{4}$ to $\frac{1}{2}$
Plymouth	8-LP1-L, LP1-M, LP1-H 8-LP2-L, LP2-M, LP2-H 8-LP2-M Fury Golden Commando Package	8-3 $\frac{1}{2}$ x4 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	132 225 290 305	AL-14 AL-14 AL-14 AL-14	45 45 45 45	45 45 45 45	.010H .012H .012H Hyd	.010H .018H .018H Hyd	.020 .017 .017 .017	39 30 38 38	.035 .035 .035 .035	2B 6B 10B 6B	6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$ 6 $\frac{1}{2}$	0 to 1 $\frac{1}{2}$ N 0 to 1 $\frac{1}{2}$ N 0 to 1 $\frac{1}{2}$ N 0 to 1 $\frac{1}{2}$ N	0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ² 0 to $\frac{1}{2}$ P ²	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
FORD MOTOR CO.																
Edsel	8-57A, B; 58A, B; 63A, B; 64A, 76B 8-57A, 57B, 63A, 63B, 76B	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	303 345	Ch-18 Ch-18	30 30	45 45	Hyd Hyd	Hyd Hyd	.015 .015	24 27	.034 .034	7B 7B	7 7	$\frac{1}{2}$ P to 1 $\frac{1}{2}$ P 0 to 1 $\frac{1}{2}$ P	$\frac{1}{2}$ P to 1 $\frac{1}{2}$ P 0 to $\frac{1}{2}$ P	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
Ford	8-223 cu. in. 8-292 cu. in. 8-332 cu. in. 8-332 cu. in.	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4x3 $\frac{1}{2}$ 8-4x3 $\frac{1}{2}$	145 205 240 300	Ch-18 Ch-18 Ch-18 Ch-18	45 45 30 30	45 45 45 45	.019H .019H .026H .026H	.019H .019H .026H .026H	.025 .015 .015 .015	37 27 27 27	.034 .034 .034 .034	4B 3B 3B 3B	7 $\frac{1}{16}$ 7 $\frac{1}{16}$ 7 $\frac{1}{16}$ 7 $\frac{1}{16}$	$\frac{1}{2}$ P to 1 $\frac{1}{2}$ P $\frac{1}{2}$ P to 1 $\frac{1}{2}$ P $\frac{1}{2}$ P to 1 $\frac{1}{2}$ P $\frac{1}{2}$ P to 1 $\frac{1}{2}$ P	$\frac{1}{2}$ P to 1 $\frac{1}{2}$ P $\frac{1}{2}$ P to 1 $\frac{1}{2}$ P $\frac{1}{2}$ P to 1 $\frac{1}{2}$ P $\frac{1}{2}$ P to 1 $\frac{1}{2}$ P	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
Lincoln	8—All	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	375	Ch-18	30	45	Hyd	Hyd	.015	27	.032	6B	7 $\frac{1}{16}$ 26°10'	0 to 1 $\frac{1}{2}$ N	0 to $\frac{1}{2}$ P	$\frac{1}{4}$ to $\frac{1}{2}$
Mercury	8—Monterey 8—Montclair 8—Park Lane	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	312 330 360	Ch-18 Ch-18 Ch-18	60 $\frac{1}{2}$ 60 $\frac{1}{2}$ 60 $\frac{1}{2}$	45 $\frac{1}{2}$ 45 $\frac{1}{2}$ 45 $\frac{1}{2}$	Hyd Hyd Hyd	Hyd Hyd Hyd	.015 .015 .015	27 27 27	.034 .034 .034	4B 4B 7B	7 7 7	$\frac{1}{2}$ N to 2N $\frac{1}{2}$ N to 2N $\frac{1}{2}$ N to 2N	$\frac{1}{2}$ N to $\frac{1}{2}$ N $\frac{1}{2}$ N to $\frac{1}{2}$ N $\frac{1}{2}$ N to $\frac{1}{2}$ N	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
GENERAL MOTORS CORP.																
Buick	8-40 8-50, 60, 70, 700	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	250 300	AC-14 AC-14	45 45	45 45	Hyd Hyd	Hyd Hyd	.015 .015	30 30	.033 .033	5B 5B	7 7	$\frac{1}{2}$ N $\frac{1}{2}$ N	$\frac{1}{2}$ P $\frac{1}{2}$ P	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$
Cadillac	8-60, 62, 75	8-4x3 $\frac{1}{2}$	313	AC-14	44	44	Hyd	Hyd	.016	30	.035	5B	4	$\frac{1}{2}$ N to 1 $\frac{1}{2}$ N	$\frac{1}{2}$ N to $\frac{1}{2}$ P	$\frac{1}{4}$ to $\frac{1}{2}$
Chevrolet	8-1100, 1500, 1700 8-1200, 1600, 1800 8-1200, 1600, 1800 8-867	6-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	145 185 250 230	AC-14 AC-14 AC-14 AC-14	31 45 45 45	46 45 45 45	Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd	.019 .019 .019 .018	30 30 30 29	.035 .035 .035 .035	TC 4B 7 $\frac{1}{4}$ 4	7 $\frac{1}{4}$ 7 $\frac{1}{4}$ 7 $\frac{1}{4}$ 2 $\frac{1}{2}$ P	$\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P 0 to 1P	0 to 1P 0 to 1P 0 to 1P 0 to 1P	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ 0 to $\frac{1}{2}$
Oldsmobile	8-88 8-98, 98	8-4x3 $\frac{1}{2}$ 8-4x3 $\frac{1}{2}$	265 305	AC-14 AC-14	45 45	45 45	Hyd Hyd	Hyd Hyd	.016 .016	30 30	.030 .030	5B 5B	7 7	0 to 1N 0 to 1N	$\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P	0 to $\frac{1}{2}$ 0 to $\frac{1}{2}$
Pontiac	8-58-25, 58-27, 58-28 8-56-25, 58-27, 58-28	8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-4 $\frac{1}{2}$ x3 $\frac{1}{2}$	240 255	AC-14 AC-14	37 30	45 45	Hyd Hyd	Hyd Hyd	.016 .016	30 30	.036 .036	6B 6B	4 $\frac{1}{2}$ 4 $\frac{1}{2}$	0 to 1N 0 to 1N	0 to 1P 0 to 1P	0 to $\frac{1}{2}$ 0 to $\frac{1}{2}$
STUDEBAKER-PACKARD CORP.																
Packard	8-57L	8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	275	Ch-14	45	45	.024H	.024H	.016	31	.036	4B	6	1N to 2 $\frac{1}{2}$ N	0 to 1P	$\frac{1}{4}$ to $\frac{1}{2}$
Studebaker	8-58G 8-58B 8-58H 8-58H-K7	6-3x4 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$ 8-3 $\frac{1}{2}$ x3 $\frac{1}{2}$	145 185 250 230	AC-14 AC-14 AC-14 AC-14	31 45 45 45	46 45 45 45	Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd	.019 .019 .019 .018	30 30 30 29	.035 .035 .035 .035	TC 4B 7 $\frac{1}{4}$ 4	7 $\frac{1}{4}$ 7 $\frac{1}{4}$ 7 $\frac{1}{4}$ 2 $\frac{1}{2}$ P	$\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P $\frac{1}{2}$ N to $\frac{1}{2}$ P 0 to 1P	0 to 1P 0 to 1P 0 to 1P 0 to 1P	$\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ $\frac{1}{4}$ to $\frac{1}{2}$ 0 to $\frac{1}{2}$

ABBREVIATIONS

8—Left only; right, $\frac{1}{2}$ N to $\frac{1}{2}$ P.

3—Eldorado models, 335.
AC—A. C. Spark Plug Div.
AL—Electric Auto-Lite Co.
B—Before top center.

CA—Champion or Auto-Lite.
Ch—Champion Spark Plug Co.
H—Hot.
HC—Hot or cold.

Hyd—Hydraulic valve lifters.
N—Negative.
P—Positive.
TC—Top center.

MOTOR AGE *Recommends*



YOUR CAR HARD TO START?

Probably you don't need a burro to get to your job but a car can be just as balky and hard-to-start. Especially in Winter. Let your friendly Automotive Serviceman check this condition now.

1957 New Passenger Car Registrations by Makes by States*

STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Edsel	Ford	Hudson*	Lincoln†	Mercury	Metro-	Olds-	Pack-	Ply-	Pont-	Ram-	Stude-	All Others	Total
Alabama	Sept. 315	76	1633	85	57	151	100	1346	6	12	223	9	263	2	379	224	31	18	157	5,078
9 Mos. 4437	889	1774	980	647	1796	100	16889	112	220	2646	95	3352	25	470	2844	506	345	1349	59,786	
Arizona	Sept. 186	95	744	75	40	107	60	854	1	19	152	8	189	9	368	161	50	24	207	3,342
9 Mos. 1324	899	6449	544	794	863	154	15888	12	46	74	184	1280	19	2390	1399	421	129	360	28,364	
Arkansas	Sept. 120	42	762	32	37	117	25	770	2	8	134	4	150	2	242	120	27	14	49	2,857
9 Mos. 2053	585	9283	387	337	1427	25	10033	55	132	1965	30	1985	16	3039	1813	282	323	306	33,958	
California	Sept. 1956	1601	10903	1244	682	2277	935	12509	80	320	1956	320	2437	32	4464	2008	450	344	4780	49,308
9 Mos. 22178	13334	92386	10778	6606	18353	935	110978	958	3560	20175	2162	23050	346	39271	20940	5058	3722	36185	430,975	
Colorado	Sept. 234	106	1110	101	45	212	77	1013	22	27	238	20	272	9	417	211	73	41	208	4,436
9 Mos. 2587	851	10223	926	534	1956	77	10316	224	276	2178	124	2463	77	4397	2140	956	459	1086	41,980	
Connecticut	Sept. 324	152	1434	155	119	363	154	267	12	6	267	26	358	3	773	345	113	74	540	5,567
9 Mos. 4059	1585	13806	1705	1209	3571	154	15617	224	475	2450	215	3670	72	7577	4026	1545	829	3881	66,816	
Delaware	Sept. 73	47	403	45	22	79	9	327	3	5	86	5	87	2	175	108	10	10	38	1,534
9 Mos. 911	388	3766	361	231	641	9	3677	26	111	770	11	886	13	1920	1074	106	128	294	15,313	
Dist. of Columbia	Sept. 79	49	406	48	25	100	13	405	2	17	77	6	99	1	253	141	17	8	124	1,870
9 Mos. 1017	604	4339	324	330	975	13	4240	35	153	846	45	1260	25	2180	1276	198	112	782	18,954	
Florida	Sept. 1089	658	4310	409	253	591	170	4031	20	146	824	75	875	9	1715	648	160	118	1451	17,552
9 Mos. 9489	4879	35624	2648	1923	5363	170	34750	279	1334	6164	515	8128	105	13444	5625	1618	986	8263	141,907	
Georgia	Sept. 479	192	2459	107	83	289	115	2382	13	6	323	13	147	8	534	223	84	54	374	5,867
9 Mos. 5679	1617	24860	1342	898	2762	111	26996	129	391	3445	142	5158	58	6816	5520	630	671	1933	98,984	
Idaho	Sept. 94	38	395	42	41	88	18	275	5	7	64	7	88	2	194	99	31	31	93	1,612
9 Mos. 1199	386	3077	319	277	706	18	2894	70	101	753	32	885	16	1428	942	467	246	400	14,204	
Illinois	Sept. 2022	852	8034	636	373	991	379	7001	56	186	1305	50	1881	16	2808	1492	410	316	647	29,455
9 Mos. 23756	8521	75607	7762	5166	10982	379	73976	982	2183	13710	263	21821	340	31260	17825	5667	3670	5454	309,324	
Indiana	Sept. 1389	370	3883	374	294	657	197	4195	35	84	742	36	1388	14	1797	1011	156	342	296	17,250
9 Mos. 11779	3041	32233	3158	2687	6075	197	36025	424	778	6620	141	9904	220	14799	8057	1863	3249	1653	142,683	
Iowa	Sept. 144	80	2321	116	30	147	32	361	9	144	7	144	7	134	423	84	54	166	8,127	
9 Mos. 4657	1159	18063	1288	942	2807	143	17555	244	296	3325	30	4192	65	6568	3726	960	757	758	67,794	
Kansas	Sept. 491	136	2309	120	103	333	118	1892	33	23	339	17	478	4	596	458	91	52	165	7,756
9 Mos. 4319	1225	17135	1128	965	2470	118	15847	235	281	3069	82	4137	58	5652	3608	893	705	636	62,765	
Kentucky	Sept. 387	86	1883	109	64	230	130	1634	9	21	294	16	486	3	538	350	34	32	95	6,401
9 Mos. 4279	851	16031	886	661	1947	130	15189	86	166	2558	51	3862	39	5366	3122	352	405	432	56,413	
Louisiana	Sept. 414	165	2822	139	81	208	126	2534	4	30	348	30	541	5	692	505	40	51	149	8,794
9 Mos. 4236	1294	23052	1159	811	2243	126	21163	57	316	3396	141	4550	45	6342	4803	431	516	799	75,602	
Maine	Sept. 483	152	756	50	90	130	17	732	1	134	223	9	144	7	134	223	84	54	143	3,116
9 Mos. 1412	397	5319	289	334	882	17	5190	105	122	948	62	1069	21	2264	1295	704	353	910	21,664	
Maryland	Sept. 363	143	2472	203	92	418	101	1886	11	31	261	17	440	9	1075	525	59	62	258	8,437
9 Mos. 4231	1343	19985	1838	1208	4208	101	18562	204	309	3036	128	4491	102	11025	4714	746	772	1832	78,835	
Massachusetts	Sept. 677	255	2862	296	208	473	193	3001	37	83	466	37	758	6	1282	620	286	85	631	12,246
9 Mos. 7533	2680	25192	2975	2356	5041	193	27247	378	755	4929	272	8502	91	12687	6197	3411	883	4705	116,087	
Michigan	Sept. 1970	778	6882	886	758	1345	819	8274	62	429	1786	89	2152	10	3168	1711	232	215	685	32,251
9 Mos. 18396	7754	60056	6191	5078	14503	819	73832	535	2145	15477	533	16994	143	32887	14758	4059	2046	5359	282,564	
Minnesota	Sept. 178	155	2402	173	131	316	189	2685	32	36	361	7	425	94	7	324	394	109	166	9,116
9 Mos. 6852	1639	22547	1999	1576	3990	189	24313	392	519	4549	49	6678	111	9426	4806	1965	1401	1153	94,352	
Mississippi	Sept. 252	64	1492	60	40	109	31	1166	2	12	194	4	311	1	380	257	15	54	50	4,503
9 Mos. 2564	585	11154	555	438	1057	31	9681	26	117	1472	21	2294	22	3438	2200	149	391	324	36,719	
Missouri	Sept. 553	227	3395	164	132	456	124	3034	21	86	420	24	696	17	1107	691	106	123	214	11,590
9 Mos. 6752	2237	31379	1673	1806	4240	124	28747	238	499	4488	117	6628	111	12320	6028	1219	1245	1446	111,699	
Montana	Sept. 120	55	535	58	24	125	15	465	5	12	80	4	109	5	210	84	40	41	68	2,055
9 Mos. 1236	434	4236	430	244	929	15	4088	70	90	814	42	1108	24	1626	803	515	282	715	17,701	
Nebraska	Sept. 229	72	1105	72	36	130	45	1139	10	15	211	6	235	1	304	172	35	40	76	3,933
9 Mos. 2007	623	9144	627	312	1023	45	9307	105	133	1746	14	1968	45	2696	1622	425	389	341	33,272	
Nevada	Sept. 22	15	76	13	5	7	127	1	1	34	1	39	1	37	26	1	6	21	433	
9 Mos. 415	223	1513	192	131	209	1594	3	82	426	16	562	14	533	499	32	143	562	7,099		
New Hampshire	Sept. 83	32	410	30	16	57	21	393	8	7	66	4	73	1	161	79	40	26	120	1,626
9 Mos. 790	289	3478	249	220	654	21	3190	81	85	613	45	717	10	1448	855	484	258	799	14,326	
New Jersey	Sept. 834	641	3586	691	449	1002	346	4034	30	121	673	43	1080	14	2238	872	138	175	707	17,674
9 Mos. 10411	5147	35804	6721	4955	9900	346	37265	348	1280	7344	294	10290	243	21827	8673	2190	2091	4766	169,943	
New Mexico	Sept. 105	49	712	45	37	79	29	943	3	9	112	10	134	1	193	110	26	33	79	2,307
9 Mos. 1272	394	5425	448	315	800	29	4900	36	108	962	50	1234	18	1593	1199	236	223	576	19,819	
New York	Sept. 2413	1334	8647	1393	916	2396	639	9668	71	281	1991	109	2555	38	5098	2355	443	429	2419	44,725
9 Mos. 28946	12129	88598	15323	10384	24229	639	92892	999	3176	20310	802	29409	444	49673	23278	6487	4416	17674	429,806	
North Carolina	Sept. 635	176	2472	174	109	294	65	2450	11	31	328	16	586	4	843	457	73	76	138	8,928
9 Mos. 5521	1439	16882	1403	1060	2455	65	21905	135	309	2899	128	4741	58	6712	4131	758	736	967	74,224	
North Dakota	Sept. 90	28	626	62	25	92	16	681	8	14	71	3	124	5	200	94	32	35	19	2,225
9 Mos. 901	354	45823	407	274	759	16	4668	85	87	784	16	1058	21	1498	659	339	234	173	9,116	
Ohio	Sept. 1948	592	8956	777	556	1774	712	7513	36	159	1580	83	1822	21	3180	1771	228	234	541	30,563
9 Mos. 21932	6263	43483	7544	8240	17485	712	74568	769	1893	15451	438	19048	310	24141	17553	3253	2847	4309	298,942	
Oklahoma	Sept. 406	120	1634	76	63	210	42	1638	12	8	278	14	421	3	457	361	54	59	13	

CURRENT PASSENGER CAR PRICE, WEIGHT AND BODY TABLE

Following are prices at factory for cars with standard equipment as of November 25, 1957
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	AMERICAN MOTORS CORP.				CHRYSLER CORP. cont'd				FORD MOTOR CO. cont'd				GENERAL MOTORS, cont'd			
	List Price	Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight	Body Make and Model	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight	Body Make and Model	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight	
AMERICAN MOTORS CORP.						DODGE, Cont'd					FORD, Cont'd					
RAMBLER*						Sta. Wagons					Fairlane 500					
De Luxe 8						Suburban, 2d	2715	215	2930	3875	Club Sedan	2289	184	2473	3454	
Sedan, 4d						Sierra, 2s	2775	220	2995	3830	Town Sedan	2339	185	2527	3258	
Super 6						Sierra, 3s	2907	230	3137	3990	Club Victoria	2345	189	2534	3484	
Sedan, 4d	2212	2067	2212	2212		Cus. Sierra, 2s	2940	232	3172	3955	Town Victoria	2405	193	2586	3561	
H. T. Sedan, 4d	2287	2063	2287	2287		Cus. Sierra, 3s	3072	242	3314	4035	Sunliner	2546	203	2719	3630	
Sta. Wagon, 4d	2506	2069	2506	2506						Skyliner	2907	231	3138	4069		
Custom 8						IMPERIAL					Sta. Wagon, 8					
Sedan, 4d	2327	2088	2327	2327		Southampton, 2d	4417	347	4764	4640	Ranch Wagon, 2d	2293	185	2470	3620	
Sta. Wagon, 4d	2621	2079	2621	2621		Southampton, 4d	4516	354	4870	4795	Ranch Wagon, 4d	2343	190	2533	3677	
Rebel, Sup. V8						Crown	4828	385	5213	4730	Del Rio Wagon	2392	192	2585	3625	
Sedan, 4d	2342	2090	2342	2342		Southampton, 2d	4828	385	5213	4730	Ctry. Sed., 8p.	2442	197	2639	3682	
Sta. Wagon, 4d	2636	2100	2636	2636		Southampton, 4d	4915	402	5317	4815	Ctry. Sed., 9p.	2542	204	2748	3750	
Rebel, Cus. V8						Conv. Coupe	5273	411	5684	4750	Country Squire	2663	213	2876	3787	
Sedan, 4d	2457	2103	2457	2457		Le Baron					Thunderbird					
H. T. Sedan, 4d	2532	2103	2532	2532		Sedan, 4d	5468	426	5894	4780	Tudor					
Sta. Wagon, 4d	2751	2118	2751	2751		Southampton, 4d	5468	426	5894	4940	Convertible					
Amb. Sup. V8						Limousine	14019	961	15000	5960						
Sta. Wagon, 4d	2587	2158	2587	2587							LINCOLN					
Sta. Wagon, 4d	2681	2158	2681	2681							Capri					
Amb. Cus. V8											Hardtop, 2d	4415				
Sedan, 4d	2732	2162	2732	2732							Sedan, 4d	4553				
H. T. Sedan, 4d	2822	2175	2822	2822							Hardtop, 4d	4553				
Sta. Wagon, 4d	3026	2168	3026	3026							Premiere					
H. T. T. Wagon, 4d	3116	2168	3116	3116							Hardtop, 2d	4884				
											Sedan, 4d	5124				
											Hardtop, 2d	5124				
											Continental					
											Coupe, 2d	5367				
											Sedan, 4d	5597				
											Hardtop, 4d	5597				
											Convertible	5792				
											MERCUARY					
											Monteire					
											Sedan, 2d	2422				
											Sedan, 4d	2487				
											Hardtop, 2d	2532				
											Hardtop, 4d	2586				
											Convertible	2622				
											Montclair	2966				
											Sedan, 4d	3011				
											Hardtop, 2d	3086				
											Trunk, Cruis., 2d	3210				
											Convertible	3244				
											Trunk, Cruis., 4d	3284				
											Park Lane	3555				
											Hardtop, 2d	3678				
											Hardtop, 4d	3788				
											Sta. Wagons					
											Comtr., 2d, 6p.	2778				
											Comtr., 4d, 6p.	2843				
											Comtr., 4d, 8p.	2932				
											Voyager, 2d, 6p.	3243				
											Voyager, 4d, 6p.	3336				
											Col. Pk., 4d, 6p.	3466				
											GENERAL MOTORS CORP.					
											BUICK					
											Special 40					
											Sedan, 2d	2388				
											Sedan, 4d	2448				
											Hardtop, 2d	2488				
											Hardtop, 4d	2560				
											Conv. Coupe	2786				
											Ext. Wagon, 4d	2862				
											H. T. Wagon, 4d	2974				
											Century 60					
											Sedan, 4d	3007				
											Hardtop, 2d	3056				
											Hardtop, 4d	3119				
											Conv. Coupe	3346				
											H. T. Wagon, 4d	3487				
											STUDEBAKER					
											Special 40					
											Sedan, 2d	2308				
											Hardtop, 2d	2443				
											Hardtop, 4d	2560				
											Conv. Coupe	2786				
											Ext. Wagon, 4d	2862				
											H. T. Wagon, 4d	2974				
											Century 60					
											Sedan, 4d	3007				
											Hardtop, 2d	3056				
											Hardtop, 4d	3119				
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											Century 60					
											Sedan, 4d	3007				
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											Special 40					
											Sedan, 2d	2308				
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											Hardtop, 4d	2560				
											Conv. Coupe	2786				
											Ext. Wagon, 4d	2862				
											H. T. Wagon, 4d	2974				
											Century 60					
											Sedan, 4d	3007				
											Hardtop, 2d	3056				
											Hardtop, 4d	3119				
											Conv. Coupe	3346				
											H. T. Wagon, 4d	3487				

**\$
25**

**FOR THE KINK
OF THE MONTH**

TIME AND WORK SAVING IDEAS ON CARS AND

SHOP KINKS

TRUCKS CAN PAY OFF. SEND YOURS IN NOW!

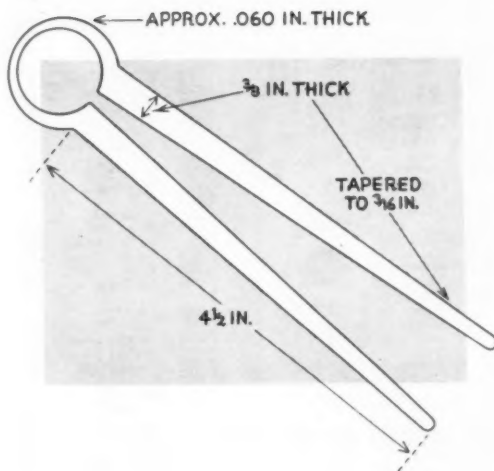
**\$
7.50**

**PAID FOR
EACH KINK**

\$25

**Reworked Connecting Rod
Helps Remove Stuck Lifters**

KINK OF THE MONTH



I have made a tool to remove varnished or stuck hydraulic lifters from 1953-57 Cadillacs, 1953-57 V-8 Buicks, 1955-57 V-8 Pontiacs, 1955-57 V-8 Chevrolets and 1949-57 V-8 Oldsmobiles. The tool is made from a connecting rod from a 1946-47 Series 40 Buick. A section approximately 6 inches long is cut from the rod, and trimmed down by grinder and file to listed dimensions. The tool gives a firm grip that will not slip on a varnished or stock lifter and they can be removed by a twisting pulling motion. *Rolof Smith, Shop Foreman, Mid-West Motors, Ltd., Rose St. & 12th Ave., Regina, Sask., Canada.*

Cure For Noisy

Mercury Speedometer

The tape drum in the 1957 Mercury speedometer is quite noisy because too much slack is left on the drum shaft. These noises can be quickly eliminated by removing the drum mounting plates and filing the two upright plate posts down until the slack is all gone in the drum shaft. Be careful to leave it just loose enough to allow the drum to turn freely. *Andy Sarratt, Manager, Parts Dept., Hailey Motor Co., 313 So. Second St., Rogers, Arkansas.*

Heater Hose Used

Over Battery Cable Ends

When removing a starter, solenoid or any time the battery cable has to be removed, I find a piece of heater hose 2 inches long very useful. Slip the hose over the cable end. This prevents a short circuit and is quicker than removing the battery cable at the battery. *A. G. Westermarck, Service Manager, New Devon Motors, Box #318, Devon, Alberta, Canada.*

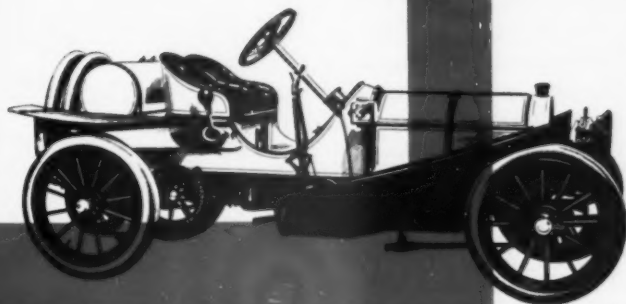
Installing Stop Light

Switches on Cadillacs

I have been having trouble installing stop light switches on 54, 55, 56 Cadillacs and Chevrolets. It has always taken 2

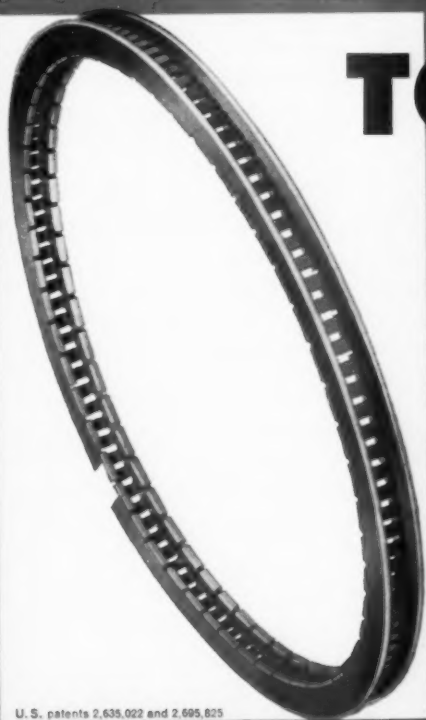
(Continued on page 70)

YESTERDAY...



when compression ratios were 3 to 1, any good oil ring would do...as in this rakish Apperson Jack Rabbit, vintage 1907. Guaranteed to turn up 75 miles per hour, the car featured 60 H.P. engine, 4-speed selective type transmission, double ignition with magneto and coil, and carried a price tag of \$5,000.

TODAY...



U. S. patents 2,635,022 and 2,695,825

it takes the PC type "98"
chrome oil ring!

The Perfect Circle Type "98" Chrome oil ring was specifically designed to meet the exacting demands of today's high-compression engines. Featuring universal application, bottomless and conventional grooves, all depths, the PC Type "98" oil ring was the first to have a patented side-sealing action with multiple tiny springs that exert both side and radial pressure. And of utmost importance, Type "98" Chrome Oil Rings provide maximum oil drainage! Perfect Circle Corporation, Hagerstown, Ind.; The Perfect Circle Co., Ltd., 888 Don Mills Road, Don Mills, Ont.

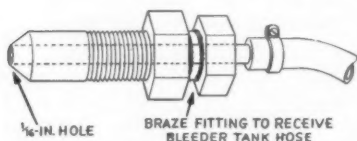
PERFECT CIRCLE PISTON RINGS

Preferred by more people than any other brand!

men to put them on. I have found an easy way to put them on. It takes me about 30 minutes to install one now. I just put a 3/16 stove bolt 2 inches long with the head removed in the screw hole of the switch. Then I put switch up through the hole of the floor board from under hood. Brake pedal can be pushed down if there is not enough room to work. When stove bolt is through hole you can see other hole of switch. Start screw in hole, bolt from inside of car. Then take out stove bolt and put in other screw. *John H. Walter, Norton Tire Co., Inc., 1454 Alton Road, Miami Beach, Fla.*

Tricky Method For Bleeding Brakes

Several cars have the master cylinder in hard to reach locations and it is practically impossible to hook up the bleeder tank. These jobs can be easily bled and filled, without touching master cylinder filler plug, by doing the following. Using an old bleeder valve of the right size for wheel cylinder, solder or braze a fitting to take bleeder tank hose. Drill a 1/16 inch hole through the valve. Remove bleeder valve from wheel cylinder nearest master cylinder (usually left front) and hook up bleeder tank, but do not turn on pressure. Then follow these steps in order: (1) Block pedal



about 1 1/2 inches with pedal jack, to seal off compensating port, and turn on bleeder tank pressure. (2) Starting with wheel cylinder farthest from master cylinder, bleed the three wheels

which are not hooked up to the bleeder tank. (3) When the three wheels are done, release pedal jack and let fluid run into master cylinder until it comes out the vent hole in filler plug. This fills the master cylinder and at the same time carries off any air left in left front line. (4) Shut off pressure and remove bleeder tank and fitting. Replace original bleeder valve and close as soon as possible. (5) Apply pedal jack with medium pressure and slowly open left front bleeder valve to expel any air that may have entered left front cylinder when tank was removed. Close valve tightly and job is completed. *John C. Muciario, Johnnie's Auto Repair, 5538 Monte Vista, Los Angeles 42, California.*

Reworked Push Rod Installs Detent Ball

We have found an easy way to install the ball bearing for the manual control valve detent lever on Ford-O-Matic transmissions. This works especially well when replacing it without removing the transmission from the car. We used a valve push rod from an overhead valve motor, ground off the top and sides and notched it to fit over the lever. This way the ball sits in

a seat and cannot jump away when pressure is applied. The notch enables the rod to be lined



up with the angle of the hole. *Donald Solt, Red Hill Garage Inc., Red Hill, Pa.*

How To Overcome Oil Leak At Valve Cover

Some older model Chevrolet motors leak oil at the valve cover, due to the cover spreading in the middle. We overcome this by making a paper templet and cutting a horseshoe shaped piece of 3/16 inch plate. They also seem to be short at the backend or I should say they do not get a good bite on the gasket at the rear. The gasket rolls up under impact or pressure resulting in oil leaks. They are also very messy and not very economical to operate either. *Neil Ledger, Watson's Service, Savona, B. C.*

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

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Officers for the coming year of IGO of Ohio are shown at left. Standing, left to right, are Harold Grindle, executive director of the Association; Lloyd Wilson, 2nd vice president; Samuel Martin, 3rd vice president; and Robert Straub, secretary-treasurer. Seated at table is Frank Hornyak (left) who was re-elected as president. Seated next to Frank is William Good, 1st vice president by re-election.



Record Attempt

Roy Leslie failed to crack his own record by about 2 mph late in August at the 9th annual Bonneville Speed Trials. His Kenz-Leslie Streamliner was clocked at 253.92 mph. Kenz-Leslie V-8 Service is a member of IGO of Denver; Mr. Wm. Kenz is a member of the Denver chapter's board of directors.

Aspiration plus perspiration enables a man to reach his goal.

Full House . . .

Continued from Page 37

two weeks vacation at the radiator repair manufacturer's school, and now happily combines his regular repair business with radiator repairing. And much of his radiator work finds its way from surrounding car dealerships.

George is now producing good work and there is evidence that, at the end of his first year, he will own his equipment. Thus, for his ingenuity and time, George Bingham has eliminated a depressing period of today's business—under-work.

You'll agree...
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PLIER OF THEM ALL

CHAN NEL LOCK
No. 420

• You'll like the all 'round usefulness of the Channellock No. 420 . . . its terrific gripping power . . . its quick, non-slip adjustability up to 1-3/4" size. And you'll find it easy to use in hard-to-get-at places because of its compact design. Mechanics everywhere say no other plier does so many jobs so well. You'll say so, too!

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FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

Torque ratings are 250 foot pounds for the light-duty truck V-8 engine at 2800 revolutions per minute. The V-8 engine is rated at 288 foot pounds of torque at 2600 revolutions per minute. Compression ratio for all Studebaker truck engines this year is 7.5 to 1.

In the light-duty line, wheelbases of 112-122, and 131 inches will be available with gross vehicle weight ratings from 4,800 pounds in the half-ton model to 10,000 pounds in the one-ton model. Pick-up bodies will be 6½ to 9 feet in length and stake and platform types will be 8 and

9 feet. The all-steel, double wall, pick-up body will be retained. The pick-up again will have wider clear floor space—51½ inches wide. A four-speed synchromesh transmission will be standard on the one-ton, and Studebaker's automatic transmission will be optional on this model.

Medium-Duty Trucks

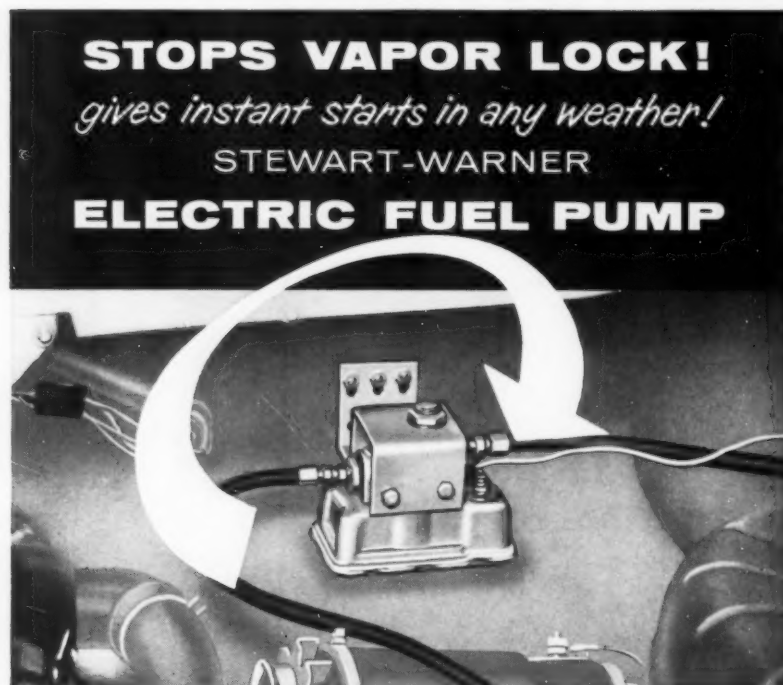
In the medium-duty line of one-and-a-half-ton and two-ton trucks, four wheelbases will be available ranging up to 195 inches for the two-ton model. The 195-inch wheelbase is designed to accommodate 16- to 18-foot vans, stakes or special bodies. Other models include factory installed 9-foot through 14-foot stake and platform bodies. For greater payload capacities, gross vehicle weights on the two-ton models are 16,500 pounds on the 155-inch wheelbase model and 17,000 pounds on both the 171-inch and 195-inch wheelbase models.

In the heavy-duty line there will be four chassis and cab models. Factory installed platform-stake bodies will be available in 9, 12, and 14-foot lengths. Wheelbases of 131, 155, 171 and 195 inches will be used. Gross vehicle weights are 18,000-19,000 pounds. The power train will include the 289-cubic-inch V-8 engine, four-speed heavy-duty synchromesh transmission, and an 11-inch clutch.

Heavy-Duty Front Axles

Heavy-duty front axles with a carrying capacity of 5,000 pounds and rear axles with a carrying capacity of 15,000 pounds will be used with these new units. A 6.8 to 1 rear axle ratio will be standard with a 6.2 to 1 ratio optional at no extra cost for higher road speed and greater economy. Two-speed rear axles with electric shift will also be available. The new trucks

(Continued on page 76)



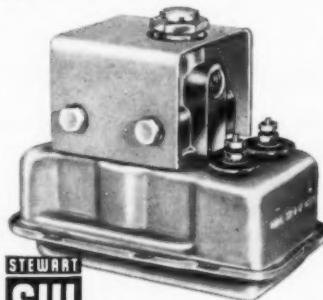
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ELECTRIC FUEL PUMP

for trucks, busses, cars!

- ★ Operates independently of engine to assure positive flow of gas—always!
- ★ No bellows or rocker arms to wear!
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- ★ Models with single or dual pumps!
- ★ Pump may be mounted under hood, on fire wall or fender panel, or on frame near gas tank.

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... a motorcompressor designed to meet the specific needs of today's modern service station and repair shop.

it's compact

A Channel-flo requires less than half the installation space of a tank-mounted, belt-driven compressor of comparable size.

it's efficient

Balanced opposed-piston construction with the time-tested I-R Channel Valve means better performance with greater economy. The compressor is mounted directly on the motor shaft, completely eliminating main bearings.

it's modern

There are no belts or couplings so a guard is not required. The new Channel-flo is safe, reliable and completely new.

it's economical

Moderate first cost, minimum maintenance, low-cost operation, continuous service rating . . . are just some of the reasons why the I-R Channel-flo should be your top choice for a dependable air supply.



Get in touch with your local Ingersoll-Rand Jobber or write direct to Ingersoll-Rand for complete data on the powerful new Channel-flo. Available in 1½ or 2 hp sizes—Two stage—rated 200#

Ingersoll-Rand
11 Broadway, New York 4, N.Y.



will have three-stage rear springs rated up to 7,300 pounds, and will be equipped with heavy-duty six-stud wheels.

A special "premium engine package" including many of the standard heavy-duty features of the big 289-cubic inch engine will be available with the 245-

cubic inch six-cylinder engine or the 259-cubic inch V-8. The package includes heavy-duty inlet and exhaust valves, heavy-duty exhaust valve springs, and rotary cap kit, chrome-plated top compression piston rings and, on the 259-cubic inch engine, heavy-duty aluminum tim-

ing gear, heavy-duty connecting rod bearings and crankshaft bearings, and a one-quart oil bath air cleaner.

A little white lie travels a mighty short distance before it gets a black eye.

GMC

Continued from Page 46

ing distance on the right hand side of the road, perfect focus on both upper and lower beams, reduction of high contrast areas and less interference with on-coming drivers in the low beam.

Stronger Frames

A heavier, stronger front frame cross member provides greater frame rigidity and minimizes front end flexing on all GMC models from the 100 series on through the model 370. A new bulkhead type radiator mounting has the radiator core bolted directly to the radiator support tie bar and side baffle assembly which in turn is spring-mounted to a frame bracket for more rigidity.

Six-wheel models with heat-treated frame rails for 1958 have a high tensile steel reinforcement at the bogie cross member, which replaces a mild steel reinforcement, to give longer life to the frame.

Exhaust and vibration noises will be reduced as a result of new flexible muffler and tail pipe mountings on GMC models 100 through 250. Bendix power steering units are available on models 350 and up, a change from former power steering units to give smoother steering.

On GMC models 100 and 100-8 a Powr-LOK differential which permits the rear axle to send the greatest driving force to the wheel that has the best traction will be offered.

THREE STEPS TO PROFIT



A KENDALL OIL FOR EVERY TYPE OF ENGINE & SERVICE

Today, engines differ greatly! Each requires special tools and specialized technical knowledge for proper servicing. The lubrication of these engines is just as specialized. That's why there are Kendall Motor Oils for every type of engine and service. All offer the natural superiority of 100% Bradford Pennsylvania Crude Oil — world's richest. By using the proper Kendall Motor Oil for the type of engine design and service, you develop more satisfied customers and steadily step up your volume and profits.

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It's so easy, any mechanic can handle automatic transmission adjustments with these *Snap-on* sets. The tools make this work as simple as a brake adjustment job.

And the returns are big! All over the country, sets like these have paid for themselves in short order. You can adjust practically any automatic transmission; many jobs take only a half hour or less. And a properly adjusted automatic transmission means big savings and greater satisfaction for the car or truck owner.

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Automatic Transmission Tool Set 2028-ATS

This set handles band and linkage adjustments on Hydramatic, Dynaflo, Powerglide, Fordomatic, Mercomatic, Flightomatic, Powerflite, and Turbodriven transmissions. It's quick and profitable because an estimated 70-75 percent of all adjustments can be done externally, without removing transmission. Photographs and easy-to-understand instructions in *Snap-on* instruction book make the job extra simple.

**AUTOMATIC TRANSMISSION SET AND
OIL PRESSURE SET COMBINATION**
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Oil Pressure Gauge Set AT-67-B

This set checks pressure of oil at critical points within transmission . . . reveals inside troubles which can't be corrected by band and linkage adjustments . . . eliminates needless work. Also, this gauge is necessary for setting linkage on certain transmissions.

On transmission overhaul, gauge localizes trouble area; spots oil leaks, pressure leaks, faulty servo pistons, clogged screens. Use it on Dynaflo, Flightomatic, Fordomatic, Hydramatic, Mercomatic, Powerflite, Powerglide, Studebaker, Turbodriven and Ultramatic transmissions.

*Snap-on is the trademark of Snap-on Tools Corporation.

**SNAP-ON TOOLS
CORPORATION**

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models and the P400 forward-control model. Maximum gross vehicle weights will span 5,100 to 46,000 lbs. Gross combination weights, advanced as much as 10,000 lbs on tandem models, will range up to 65,000 lbs.

Light and medium-duty trucks will be different in ap-

pearance from heavy-duty models. This has been accomplished with two new grille designs. A bright, chrome-trim package is offered for a distinctive flavor. A full-width alligator hood, heavy-duty bumpers, and twin headlights will be carried on all models. Dodge engineers claim

the full-width hood will provide easy engine accessibility. The hood reportedly swings upright to a full 90 deg.

A new four-wheel drive model, the W300 Power wagon, will be offered in pick-up, stake, chassis and cab, and chassis and cowl models. A panel truck has also been added to the W100 models.


New Safety Features

Turning to safety, new hydraulic brakes have been added to medium and high-tonnage models. This has caused brake lining areas to increase as much as 152-sq. in. Power brakes will, of course, be standard for all trucks. Dodge has installed a full traction differential in its D100 models. Engineers assure better traction over slick surfaces with the addition.

Night driving has been facilitated with dual headlights and the adoption of nine light body colors, some in discerning two-tone combinations. Dodge engineers have mounted the gas tank beneath the cab away from the driver. According to Dodge, cabs will be more comfortable on '58 models. A new transistorized radio has been installed between the sun visors, enabling the driver to change the dial without lowering his eyes.

JOYCE

Lifts Profitable to HARR Ford




We saved on initial costs . . . are saving mechanics' time, says Motor Co. President

Harr Motor Company, Ford Dealer in Worcester, Mass., installed versatile, profitable Joyce Lifts throughout. President Leo W. Malboeuf states:

"We were fortunate in having a qualified supplier who helped us select the right Joyce Lift Model for each of our departmentalized service stalls; saving hundreds of dollars in acquisition costs and providing obvious savings in mechanics' time."


Leo W. Malboeuf PRESIDENT



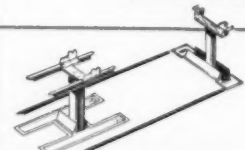
JOYCE SINGLE POST H-MASTER LIFT

Mr. Malboeuf echoes hundreds of other dealers who have found that Joyce Lifts give these advantages:

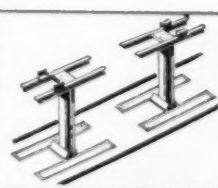
- HIGH WORKING CAPACITY • IMPROVED CUSTOMER RELATIONS
- FAMOUS JOYCE JACKING UNIT • FAST CAR AND TRUCK SPOTTING
- MAXIMUM UNDER-CAR ACCESSIBILITY



JOYCE TWO POST TWIN-MASTER FRAME LIFT



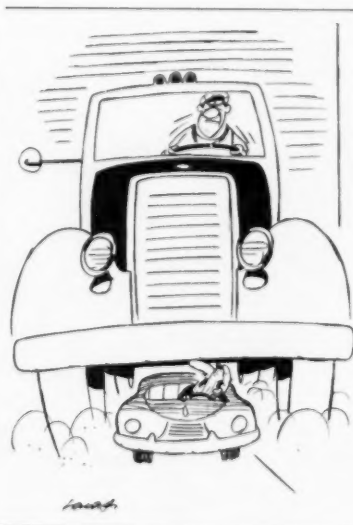
JOYCE TWO POST SHOPMASTER LIFT . . . THE MECHANICS LIFT
JOYCE TWO POST COMBINATION AUTO, LIGHT TRUCK LIFT
(not illus.)

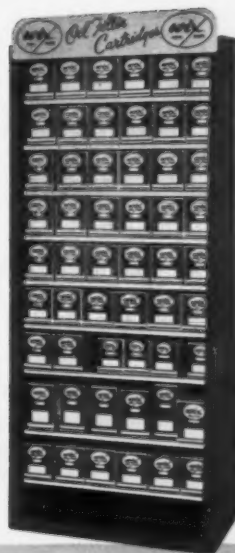


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... and **YOU'RE** going **RIGHT** for **PROFITS** with **WIX!**



SENSATIONAL WIX "SPIN-ON" FILTER

Original Equipment on America's Leading Cars

Easy, twist-of-the-wrist installation and removal. Self-contained unit with built-in relief valve, gasket, and anti-drainback valve.

Now! Modernize pre-'57 Ford, Lincoln and Mercury PLUS Buick, Oldsmobile and Pontiac

WIX Conversions replace these old-style, full-flow filters in jig time—adapt these vehicles to use WIX "SPIN-ON" Filter. WF-15 for Ford, Lincoln, Mercury; K-40 for Buick, Oldsmobile, Pontiac.



There's a WIX Oil Filter Cartridge engineered for *every* car and truck on the road—and when you have the exclusive WIX-O-MATIC selling and service plan going for you, you're in the money! *You select* the exactly balanced stock that's right for you—and your sales are **GUARANTEED!**

You get a good deal with WIX — top-quality Filter Cartridges, profitable selling aids, and the hi-impact of **LIFE** and **SATURDAY EVENING POST** advertising that pre-sells WIX! to your customers.

Get the whole WIX story — you'll be amazed what WIX can do for you — and what you can do with WIX! Get those extra profits and **PLUS** sales. Ask your Jobber, or write us direct — **TODAY!**

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NEW!

Dry Type Air Filter Cartridges for 1957 cars so equipped. Exclusive **POLYMER** filtrant for maximum clean air flow.

cab-to-axle dimension: advantageous for certain trailer operations, (2) three cab-chassis models in the 60 series with 124-in. cab-to-axle dimension to permit bodies chassis with 8, 10 or 12-ft van-type bodies on 104, 125 and 137-in. wheelbases.

Cargo space in these new

vans is 276.45, 334.21 and 392.1 cu ft, respectively. GW ratings are from 5600 to 10,000 lb, depending on tire, spring, and axle options.

"Workmaster" Engine

The 348-cu in. "Workmaster" engine—rated at 335 lb ft of

torque at 2800 rpm, 230 bhp at 4400 rpm—is entirely new. With the exception of some minor items, its components are not interchangeable with either the 283 or the 322-cu in. V-8 engines.

Chief among the design features of this engine are a new cylinder block and head. The complete combustion chamber is located wholly within the cylinder bore. Top face of the block is machined at a 74 deg angle to the centerline of the bore instead of the conventional 90 deg, inclining the head more toward the horizontal. Thus the top of the cylinder is elliptical rather than round, making more space for larger valves, central location of the spark plug and staggered valve arrangement.

Aluminum Pistons

"Peaked roof" aluminum pistons are positioned with one dome surface parallel to the plane of the flat head and the other at a 32 deg angle to it. The result is a thin squish and quench area in one-half the cylinder and a wedge-shaped combustion chamber in the other. The arrangement is said to (1) induce extreme turbulence in the fuel-air mixture and (2) together with the short flame travel from the centrally located spark plug, induce high efficiency of combustion.

Exhaust valves are sodium-cooled, Stellite-faced, are used with replaceable Silichrome valve seat insets on the cylinder heads. They are equipped with valve rotators of "Rotocoil" design. Intake valves are aluminum coated.

Camshaft drive is by means of a roller chain. Valve springs are equipped with dampers and hydraulic valve lifters are standard. Pressed steel rocker arms are mounted on individual studs, while pushrods are hollow to provide for lubrication.

**NEVER SO MUCH
BRAKE DRUM
LATHE**

**FOR SO LITTLE
MONEY!**

**Dealers—
it's NEW
and for you!**

**NEW—
NO. 304**

Designed for Precision Machining Brake Drums on Passenger cars and Trucks UP TO 10 TONS!

Sliding and Revolving solid Spindle—3" Diameter . . . cuts set-up time.

12" Spindle travel gives easier access to drum interior.

Multiple speeds and independent feeds. 1 HP Motor.

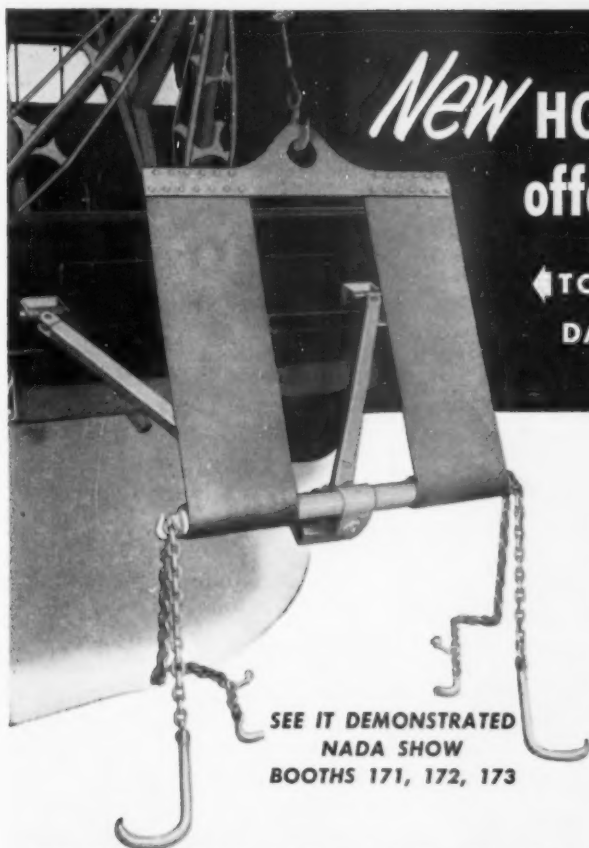
Turns AND Wet Grinds, SIMULTANEOUSLY, with Vapo-Jet WET Grinder attachment.

There are 2 certain ways to make steady, big profits in today's great demand for Brake Drum Reconditioning! 1) Put this new, medium priced Lathe to work for YOU! Or, 2) take your Brake Drum work to a VAN NORMAN Jobber's Shop that is equipped to turn out these jobs quickly and inexpensively for you. This great, new No. 304 Lathe provides the precision, mirror finish that means maximum life to linings.

An easy, "Pay-as-You-Profit Plan" will put this medium priced Lathe to work for you. Ask your Jobber about the new Heavy Duty No. 304, or write us and we'll tell you where you can get Precision Machining Brake Drum service—from a Shop near you. Van Norman Automotive Equipment Company, Springfield 7, Mass. A Division of Van Norman Industries, Inc.

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VAN NORMAN IN MODERN, EFFICIENT SHOPS—EVERYWHERE!
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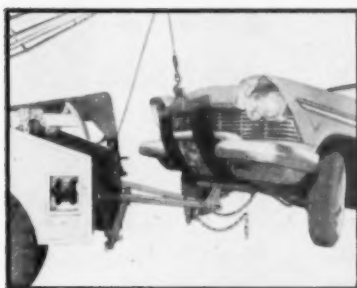
New HOLMES TOWING SLING offers CUSHIONED SAFETY

◀ TOWS ALL 1958 CARS WITHOUT
DAMAGE to CHROME or BODY PARTS

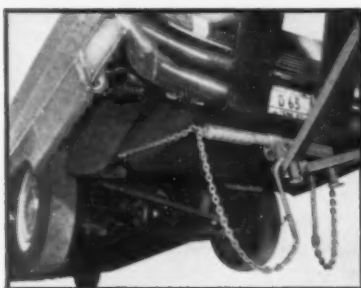
SEE IT DEMONSTRATED
NADA SHOW
BOOTHS 171, 172, 173

The HOLMES UNIVERSAL CAR-GUARD TOWING SLING was developed in cooperation with car manufacturers who approved it as the safest means of handling 1958 cars with their modern body styling and air suspension. The new Holmes Sling introduces an entirely new principle of lifting which eliminates danger of damage to a car during towing operations. This is made possible by suspension on high strength, durable fabric straps that provide a new type of *cushioned safety*. Bumpers, bumper guards and painted surfaces are protected due to the fact that no metal comes in contact with these parts. The design of this Towing Device affords the *fastest* method of pick-up ever devised, seldom requiring an operator to be on the scene longer than 1½ minutes.

PROVIDES Cushioned Protection FOR EVERY TYPE OF HOOK-UP



FRONT END PICK-UP showing hooks attached to lower suspension arms. NOTE how car is cradled in fabric straps which conform to various contours and spread the load over a large area so as not to damage light grills or panels.



REAR END PICK-UP with short spurs inserted into holes in longitudinal structural members. NOTE this hook-up can be made easily from side without crawling under car.



REAR END PICK-UP with hooks attached to axle. NOTE chains are of ample length to reach any axle. The telescopic "V" type bars properly space car from tow truck and afford a sharp turning radius.

HOLMES
Wrecker Equipment

The HOLMES Sling is furnished with spacer bars, lifting straps and two (2) sets of chains with four (4) different hook attachments. It is adaptable to most wreckers, easy to install, profitable to use. Write factory for details on the New HOLMES Sling for safer handling of your customers' cars.

ERNEST HOLMES COMPANY

Chattanooga 7,

Tennessee

modification of the ventilating system. An alteration of the accelerator pump system is designed to increase six-cylinder economy.

Ford's heavy duty trucks will carry new, heavier transmissions. Medium weight models will offer an optional automatic

transmission with improved retarding ability at higher speeds. The handy pickup truck will wear the Styleside box, which matches the cab in width and offers 25 per cent more payload capacity.

Examining the heavier series, Ford will offer a wide choice of

auxiliary fuel tanks at option. If carried, the tanks will increase fuel volume to 120 gal. The new tanks have submerged electric fuel pumps which are said to minimize the hazard of vapor lock.

Heavier new axles

New front axles, heavier, are offered this year at option. A high capacity, rear tandem axle is also offered optional for Ford's 1700 series. The axle provides models with a 32,000 gross vehicle weight rating. Another 1958 addition is a 40 amp generator which is installed on trucks of the 750, 800 and 900 series. Medium and heavy duty models will use new, larger brakes.

Ford will also offer a new triple-drive range automatic transmission for medium and heavy duty models. New extra-heavy duty transmissions are available for tandem trucks, for which heavier duty transmissions are also offered. An eight-speed transmission is ready for heavy and extra-heavy duty models.

For highway visibility, electric windshield wipers will accompany all eight cylinder engines. Six cylinder models will have dual vacuum, positive action wipers. All air wipers will be part of air brake - equipped trucks.





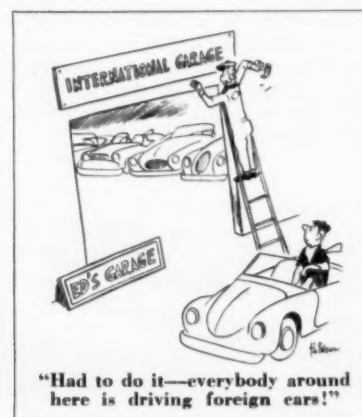
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Be the cooling system expert in your area. Use a Stant T-250 Precision Tester to build customer goodwill. Enjoy the money-making possibilities of complete cooling system service. Insure your Guaranteed Winterizing Program by finding the leaks first. Get needed caps now.

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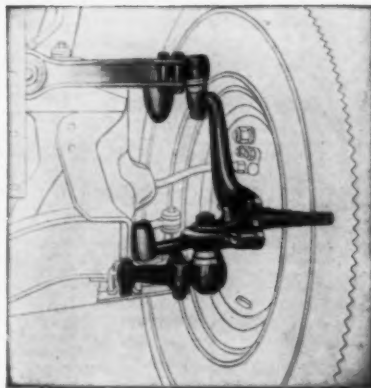




MORE AND MORE CAR MAKERS JOIN THE SWING TO BALL JOINTS

TOLEDO STEEL BALL JOINTS.

identical to original equipment parts, permit both right and left steering and up-and-down motion of the wheels on ball or spherical bearing surfaces. This advanced front suspension principle not only makes steering safer and easier, but also allows valuable extra space for larger engines and for more functional chassis design. The replacement market for this new product is expanding rapidly.



Replacement market for ball joints is expanding rapidly

Ball joint suspension first appeared on new cars in 1954. Ten new car models featured this suspension in 1957, and the number is expected to increase in 1958. And for good reason! Ball joints help cars hug the road, make steering easier and safer, aid advanced styling.

Today the replacement market for this revolutionary new product is growing by leaps and bounds. Toledo Steel, a leading chassis parts supplier for more

than 50 years, offers you a complete line of identical ball joints for the replacement market. Be sure your stock is adequate now!



TOLEDO STEEL PRODUCTS

Division of Thompson Products, Inc.

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er-balance spring, can cause serious injury if the motor assembly is removed without locking the regulator sector in position.

Drill a $\frac{1}{4}$ " hole through the back plate and regulator sector indicated by "A," "B" or "C" in Fig. 1, depending on the po-

sition of the lift arm.

Be especially careful not to drill through the motor housing.

Insert a $\frac{3}{16}$ " bolt through the hole and install a nut on the bolt, but do not tighten the nut. Take out the bolts "D" in Fig. 1 that secure the motor to the back plate and remove the motor

from the regulator. [See page 62.]

To install the motor, place the motor in position on the back plate and move the lift arms up or down so that the motor pinion gear will mesh with the teeth on the regulator sector, then replace the motor attaching bolts.

Be sure to remove the temporary nut and bolt from the regulator after the motor has been installed.

Replace Door Window Regulator

Carefully work the regulator assembly into place through the rear access hole, then install the regulator attaching screws. Place the inner panel cam on the regulator arm and attach the cam to the inner panel. (On front doors replace the ventilator division channel adjusting stud and nut.) Connect the wiring harness, then lower the glass and replace the lower sash channel screws.

Before going any further, connect the battery and turn on the ignition, then place a jumper across the terminal block to check and correct the operation of the window for alignment.

After adjustments have been made, replace the access hole covers, set the trim panel in place and connect the control switch to the terminal block, then fasten the trim panel to the door. Replace the inside door handle and garnish moulding and check the operation of the window once again.

On Chrysler and Packard cars to remove door window lifts, here is the pattern: Lower the window and disconnect the battery, then remove the garnish moulding, inside door handle and arm rest. Pry the trim panel away from the door, disconnect the wires or terminal block from the control switch and remove the trim panel. Disconnect the wires from the lift motor, then detach the window lift arms from the lower sash channel. Now

(Continued on page 86)

NIEHOFF

Testing Equipment

For the Mechanic Who Wants to do the Job Right

 <p>TSC-15 Portable Voltage Regulator Tester. Rolls up to fender height. \$64.00</p>	 <p>T-30 Dwell Meter. Helps set contact point gap or cam angle. For use on 6 or 12 volt systems. \$29.50</p>	 <p>T-31 Tachometer. Required for automatic transmissions. Use to adjust engine idle mixture and set engine idle r.p.m. \$35.50</p>	 <p>T-34 Power Light. Use on both 6 and 12 volt systems. Battery operated. \$35.50</p>
 <p>T-14 Voltage Regulator Tester, for 6 and 12 volt systems. \$39.50</p>	 <p>T-27 Compression Gauge. Calibrated to 200 lbs. Pistol Grip. \$8.90</p>	 <p>T-3 Starter Current Indicator. \$3.90</p>	 <p>T-32 Portable Stand Consists of T-30 Dwell Meter, T-31 Tachometer and TS-15 Stand. \$80.50</p>
 <p>T-28 Motor Tune-Up Kit: Timing Light, Vacuum Gauge, Compression Gauge. \$30.50</p>	 <p>T-4 Time-O-Lite. Works in close quarters. \$4.95</p>	 <p>T-26 Compression Gauge. Calibrated to 200 lbs. \$5.50</p>	 <p>T-25 Vacuum Gauge. 0"-25" Vacuum. 0-7 lbs. pressure. \$7.90</p>
 <p>T-22 Distributor Wrench. For '53 D. R. Distributors. 95c</p>	 <p>T-10 Flex-Neck Pow-R-Lite. 110 Volt A.C. \$24.00</p>	 <p>T-11 Growler. A. C. Current, 110 volt, 60 cycle. \$21.50</p>	 <p>HB-2 Bleeder Tank. Handy for all cars. \$39.00</p>
 <p>T-23 Point Gap Setter. For new D. R. Distributors. \$1.50</p>	 <p>T-12 Growler. 0-30 ampere scale. \$24.00</p>		

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BRANCH: LOS ANGELES 15, CAL., 1330 W. Olympic Blvd.



"Who's got time to write ads? We're too busy writing orders!"

—says Bernard O'Daniel, President, Key Motors, Inc., Evansville, Ind.

"Response to our new 1958 De Soto has been terrific," says Mr. O'Daniel, "from the Firelite all the way down to our new, moppet-sized Firemite, the hottest promotion tool I've seen in 22 years selling cars. We had six thousand people visit our showroom in the first four days alone . . . and we've been busy writing orders ever since!"

Bernie O'Daniel is typical of the smart,

aggressive, promotion-minded De Soto dealers who are discovering that a De Soto franchise is worth more in '58 than ever before. His 1958 De Soto line is the engineering and styling leader, with prices covering the entire medium-price field. He has the support of strong national advertising, backed by a year-long program of hard-hitting selling promotions. And he's *working* with it—making the *most* of it!



BERNIE O'DANIEL says . . . "Look to the future . . . IT PAYS TO BE A DE SOTO DEALER!"

Window Lifts Continued from Page 84

raise the glass and prop it in the upper position, then remove the window regulator to door attaching screws and the pivot guide retaining pin. Lower the motor and regulator assembly and work it out through the opening in the door.

The window lift motor may be replaced without removing the regulator assembly. Remove the trim pad, disconnect the wires from the motor, remove the nuts holding the motor to the gear box and pull the motor down and away from the shaft.

Replace the motor in the reverse order of removal.

Caution: Note the position of the regulator gear and the counter-balance spring. With a large pair of pliers carefully remove the spring before attempting to remove the gear box. Due to the tension of the spring serious injury may result if this precaution is not taken.

After the spring has been removed, take out the screws holding the gear box to the regulator and remove the gear box. Then remove the nuts holding the motor to the gear box and pull the motor away from the shaft.

To install the gear box, mount it on the regulator so that the gear box pinion meshes with the regulator gear, then replace the gear box screws and the counter-balance spring. Install the motor on the shaft and replace the motor mounting nuts.

Place the motor and regulator assembly through the opening in the door and insert the pivot arm pin into the guide, there is no clip, then install the regulator attaching screws, finger tight. Make certain the pivot arm pin did not slip out of the guide, then insert and secure the control arms into the lower sash channel. Connect the wires to the motor and connect the battery, then using a jumper across

the terminal block check and correct the operation of the window for alignment.

After adjustments have been made, set the trim panel in place and connect the control switch to the wires or terminal block, then fasten the trim panel to the door. Replace the arm rest, inside door handle and garnish moulding and check the operation of the window once again.

Ford Motor Co.

Two types of electric regulator assemblies, "A" (Fig. 3) and "B" (Fig. 2), were installed in 1952 to 1954 Ford Motor Company cars. The two assemblies are interchangeable but the installation of type "A" is different than the installation of type "B." The arm and plate is not an integral part of type "A" but is an integral part of type "B."

To remove door window regulator on Type "A": Lower the window and disconnect the battery, then remove the hardware, garnish moulding and trim panel and disconnect the wires from the control switch. Remove the clip that attaches the arm and plate to the regulator (Fig. 3), then remove the cap screws that secure the regulator to the inner door panel. Lower the assembly and remove it through the access hole. Remove the cover plate with the relay attached and disconnect the wires from the motor to the relay.

To remove the arm and plate assembly, detach the arms from the rollers, then raise the window and prop it in the upper position. Remove the cap screws that secure the arm and plate assembly to the inner door panel, then slide the assembly forward to release the roller from the guide on the inner door panel. Lower the assembly and remove it through the access hole.

To replace motor and bracket support assembly on Type "A" (see Fig. 3), clamp the window regulator assembly in a vise and unload the counter-balance spring by pulling the hooked end up and over the stop. Remove the three screws that hold the motor and bracket support to the regulator and remove the motor. Take off the cover and shaft from the motor and bracket support, then remove the coupling, pinion and shield assembly from the regulator.

To install, assemble the coupling, pinion and shield assembly, then position and install the cover and shaft to the motor and support bracket. Place the motor and support bracket on the regulator and install the three screws, then load the counter-balance spring.

To replace door window regulator, Type "A," raise the regulator assembly into position in the door panel and install the retaining screws, but do not tighten them until adjustments are made. Connect the wires from the motor to the relay and install the plate with the relay attached, to the door.

To replace the arm and plate assembly, lower the window and assemble the rollers in the glass channel, then raise the arm and plate assembly and start the roller on the guide. Install the retaining screws but do not tighten them. Connect the regulator link to the arm and plate assembly and install the clip. Lubricate all rollers and guides, then connect the battery. Place a jumper across the control switch wires and check and adjust the alignment of the window, then tighten the regulator screws and the arm and plate screws. Connect the control switch wires and replace the trim panel and hardware.

To remove door window regulator, Type "B," lower the window and disconnect the battery, then remove the hardware,

garnish moulding and trim panel and disconnect the wires from the control switch. Detach the arms from the rollers on the glass channel, then raise the window and prop it in the upper position. Remove the cap screws that hold the regulator assembly to the inner door panel, then slide the assembly forward to release the roller from the guide on the inner door panel. Lower the assembly and remove it through the access hole. Remove the cover plate with the relay attached and disconnect the wires from the motor to the relay.

To replace motor assembly and coupling, Type "B," disconnect the battery, then remove the hardware, garnish moulding and trim panel and disconnect the wires from the control switch. Remove the two nuts and washers which hold the motor to the window regulator assembly, pull the motor and rubber drive coupling away from the regulator, then out through the access hole. Remove the cover plate with the relay attached and disconnect the wires from the motor to the relay.

To install, attach the rubber coupling to the drive shaft and insert the motor and coupling through the access hole. Slide the rubber coupling over the drive assembly pinion, line up the motor attaching studs to the regulator and install and tighten the nuts. Connect the wires from the motor to the relay and secure the relay and cover to the door. Connect the wires to the control switch, then replace the trim panel, hardware and garnish moulding and connect the battery.

Clamp the window regulator assembly in a vise and unload the counter-balance spring by pulling the hooked end up and over the stop. Remove the screws that hold the drive assembly to the regulator and pull the drive pinion out of the rubber coupling.

To install, place the drive assembly on the regulator, slide the drive pinion into the rubber coupling and replace the screws, then load the counter-balance spring.

To replace door window regulator, Type "B," lower the window and assemble the rollers in the glass channel, then raise the regulator assembly and start the roller on the guide. Install

the regulator retaining screws, then connect the wires from the motor to the relay and secure the relay and cover to the door. Connect the battery, then place a jumper across the control switch wires and check and adjust the alignment of the window. Connect the control switch wires and replace the trim panel and hardware.

(Part II continued next month)



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RADIATORS!"**

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McRill says: "My Inland-equipped radiator dept. gave me an additional \$12,416 in 1955—over \$16,000 in 1956! My total repair volume is up 41%, due largely to added business attracted by my radiator dept. To Inland equipment and training goes much of the credit!"

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INLAND NATIONAL ADVERTISING HELPS YOU! Inland ads in the Post and Life warn car owners of the danger of neglecting radiators... urge regular servicing... suggest seeking the nearest shop displaying the Inland sign. Inland, world's largest radiator servicing equipment manufacturer, offers the complete package—equipment, training, merchandising, even a "Pays-For-Itself" purchase plan. Mail the coupon for free descriptive book.

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Are you now operating a radiator dept.? ☐ Yes ☐ No

Horsepower Continued from page 49

package; the Chrysler 300C is 390-bhp with fuel injection and 380-bhp with an 8-barrel carburetor; and Lincoln is rated 375-bhp with a standard 4-barrel carburetor.

However, the arrangement of engines in the tabulation is based not upon maximum out-

put but according to the ratio of Bhp/cu.in. As shown, the first five places in the tabulation are as follows: No. 1 — Corvette with fuel injection and special camshaft; No. 2 and 3 to the Chrysler 300C; No. 4—Golden Hawk with McCulloch supercharger; and No. 5 — Lincoln

and Mercury with 6-barrel carburetion.

This year all makes have improved the ratio of Torque/cu.in. displacement. The four top ratings are as follows: Edsel—1.158; Lincoln—1.139; Chrysler Division—354 cu.in. engine—1.144 and the 392 cu.in. engine—1.147. The other engines, however, are quite comparable within small percentage points.

From the standpoint of bore/stroke ratio, the trend has been to shorter stroke and much larger bore. The only exceptions are the three engines which have not changed physically this year. The Dodge Royal—0.97; Golden Hawk and President—0.98. All the rest are oversquare, the top ratios being — Mercury with 1.30; and Chevrolet with 1.29. This trend, coupled with suitable rear axle ratios accounts for lower engine speeds for a given road speed.

Compression ratio, with only a few exceptions touches 10 to 1 with maximum rating of 10.5 to 1 on a number of makes. Obviously, compression ratio must inch upwards to stay within the bounds of the octane ratings of fuels.

Figures may not lie, but some get snarled up in statistics.

Pressure Cap . . .

(Continued from page 41)

exposed. Faulty head gaskets, leaking radiator cores, leaking heater hose connections are also revealed. In short, the pressure tester is an excellent Sherlock Holmes to solve cooling system problems!

(The editors acknowledge with appreciation the contributing data furnished for this article by Mr. Glen A. Johnson, Stant Mfg. Co. engineer, Connersville, Ind.)

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Haviland's all new THERMO FLO muffler gives instant distribution of hot exhaust gases to all chambers of the muffler. This even distribution maintains a uniform temperature throughout the muffler, minimizing condensation which is the major cause of internal muffler wear. THERMO FLO design, by using full length large diameter tubes and unobstructed gas flow, silences more effectively without undue back pressure.

To deaden shell sounds more effectively, THERMO FLO mufflers feature the heaviest twin shell available. This extra heavy shell also increases the life of THERMO FLO mufflers over ordinary muffler designs.

THERMO FLO construction incorporates time tested Haviland design features such as smoothly clinched leak-proof nipples, heads, and body seams. Exclusive Haviland V-slots permit quicker and easier leak free installations of the all new Haviland V-slots permit quicker and easier leak free installations of the all new quieter and longer lasting THERMO FLO mufflers, guaranteeing satisfaction to all.

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The XCELITE No. 112 Unit features a quick-change chuck at the working end of its flexible shaft. With the hooded screwdriver bit in the chuck, it's easy to adjust the carburetor idle mixture screw. A quick change to the Allen bit and you're ready to adjust Delco-Remy Distributors.

The flexible shaft saves time by letting you get into those "hard-to-reach" places. The chuck, plus the flexible shaft, saves you the added expense of stocking several bits of different lengths. Extra bits are available at low cost to fit larger screw sizes.

And, along with all these brand-new time-saving, money-saving features . . . you get the old, reliable XCELITE quality, dependability and a long life of trouble-free service.

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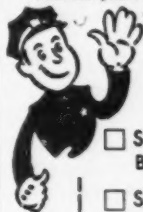
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Oklahoma School Teaching Diesel

"More testing and less guessing" is Frank Tozer's formula for success. Tozer is a specialist in starting machines. It is his job to teach Diesel students at Oklahoma A. & M. Tech, Okmulgee, the proper method of getting engines started.

He's taught over 111 classes.

Students can and do test every unit of the car or truck engine. All units with the exception of the carburetor can be tested without being put on the engine. The carburetor must be put on the engine before it can be tested.

There are 11 engines in the Diesel shop, parts of which students and instructors have disassembled and reassembled over

100 times. That is part of the task of keeping the machines running.

In a "dry" run the student may be told that a unit is bad. He must disassemble the unit, test each part, then when it is all apart and has been tested, he is told to assume that he has all new parts and to reassemble it.

National A. M. A.

Lane J. Walker, of Peoria, Ill., has been appointed to the 3rd vice presidency of the National Automotive Maintenance Association. Announcement of the successor to L. C. Kater in this post was made by C. A. Fox, president. Mr. Kater had resigned because of press of business.

Sports Car Racing Receives Boost

The American Oil Company has entered into an agreement with the Lime Rock Corp., Conn., for the support of sports car racing and safety development at northwestern Connecticut's new race circuit.

As its initial step, Amoco awarded a gold trophy to the winner of the "Little Le Mans" 10-hour endurance race for small production cars, October 12.

The track at Lime Rock will also serve as an outdoor laboratory for Cornell University's highway safety tests.

For Automatic Transmission Parts

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The Largest, Most Complete Line in the Business!

Now . . . a single source for ALL your automatic transmission parts needs, for ALL MAKES OF TRANSMISSIONS. Bushings, plates, gaskets, sealings rings, the basic hard parts . . . LEMPCO

supplies them *all*, in quality guaranteed to equal or surpass original equipment specifications. Save time, save work . . . see your Lempco jobber, or write us for his name.

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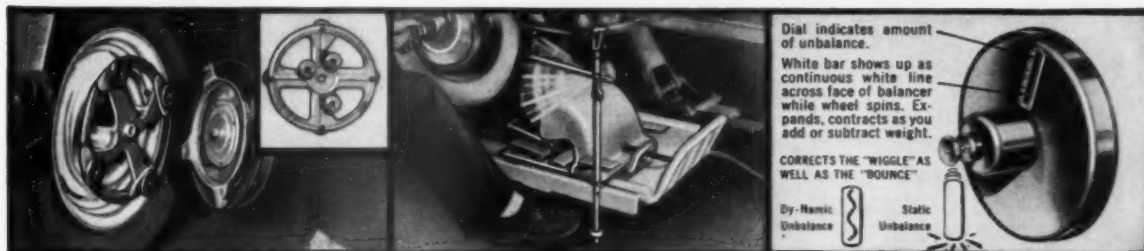
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gives you such superior balancing control! Just 2 knobs to use! Tells you if you're adding or taking away weight *while wheel is spinning...Balance Prover tells when you're through!*

Compare Fact for Fact...See for Yourself Why You Can Make More, Do More with BEAR On-A-Car!

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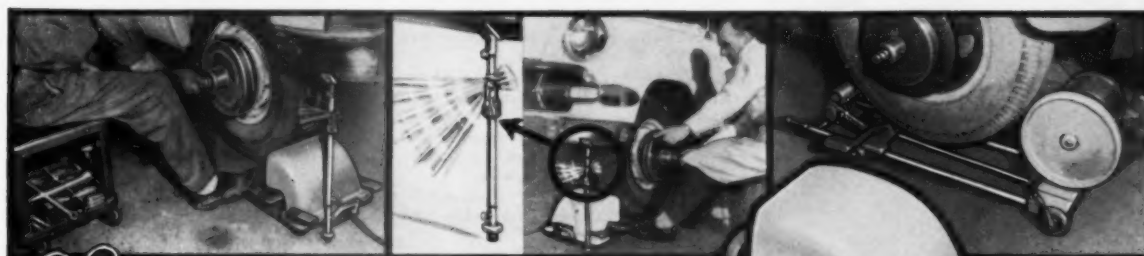
lets you *sit* while balancing... no squatting or stooping! It's the most convenient, safest arrangement: you work from the side, spin from the front. Closely simulates driving conditions.

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has the Balance Prover! Nothing like it to dramatize the need for balancing! A real sales clincher...shows customers just how badly wheels are out of balance.

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brings you all these ease-of-operation features in an On-The-Truck Balancer, too! Handles all types of Budd-type wheels, cast-spoke types or light truck wheels.



...and **ONLY BEAR** brings you the pulling power of the **NATIONALLY-ADVERTISED BEAR SIGN!** Nothing like it to draw more cash customers!

FREE ON-A-CAR DEMONSTRATION PROVES ALL THE BEAR FACTS!

See why only Bear brings you so much speed, accuracy and ease of operation! What's more, you can be sure your ON-A-CAR will never be out-of-date! Everything you need to get right into big-profit balancing is there. Handles all wheels, including the new 14" size... nothing extra to buy... nothing extra to install! Get all the Bear Facts and a **FREE DEMONSTRATION** from your Jobber or write:

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R-1558

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New, green-flecked Sol-Speedi-Dri floor absorbent does more . . . does it better. Absorbs—thirsty for oils, greases, liquids. Retains—picks up more . . . holds more. Covers—goes further than ever. Resists—won't cake, mat, break up, or get "mushy." Dustlessness—most dust-free you can buy. Uniform—bag after bag, ton after ton.

For sample, see your local jobber, or write Speedi-Dri Div., Minerals & Chemicals Corp. of America, Essex Turnpike, Menlo Park, N. J.



Calendar Of Coming Events

Dealers Conventions

- Jan. 11-15, 1958—National Automobile Dealers Assn., Miami Beach.
- Feb. 23-24 — Louisiana Automobile Dealers Assn., Inc., Roosevelt Hotel, New Orleans.
- Apr. 10-11—Illinois Automotive Trade Assn., Springfield, Ill.
- May 5-7—Joint Convention, Washington State Automobile Dealers Assn. and the Motor Dealers Assn. of British Columbia, Empress Hotel, Victoria, B. C.
- May 11-13—Idaho Automobile Dealers Assn., Lewiston, Idaho.
- May 11-14—36th annual convention, Automotive Engine Rebuilders Assn., Sheraton-Park Hotel, Washington, D. C.
- May 12-13 — Pennsylvania Automotive Assn., Haddon Hall Hotel, Atlantic City, N. J.
- June 8-9—Automobile Dealers Assn. of Indiana, Mirott Hotel, Indianapolis.
- Sept. 14-16 — Michigan Automobile Dealers Assn. Pantlind Hotel, Grand Rapids.

Automobile Shows

- Dec. 14-19—Miami Automobile Show, Dinner Key Auditorium, Miami.
- Jan. 3-11, 1958—Upper Midwest Auto Show, Municipal Auditorium, Minneapolis.
- Jan. 4-11—Buffalo Auto Show, Masten Avenue Armory, Buffalo.
- Jan. 4-12—Chicago Auto Show, International Amphitheatre, Chicago.
- Jan. 4-12—National Automobile Show, New York Coliseum.
- Jan. 11-19—National Capital Area Auto Show, D. C. National Guard Armory, Washington.
- Jan. 17-24—San Antonio Auto Show, Bexar County Coliseum, San Antonio.
- Jan. 17-25—Indianapolis Automobile Show, Manufacturers Bldg., State Fair Grounds, Indianapolis.
- Jan. 18-25 — Pittsburgh Automobile Show, Hunt National Guard Armory, Pittsburgh, Pa.
- Jan. 18-26 — Cincinnati Auto Show, North and South Wings, Music Hall, Cincinnati.
- Jan. 18-26—Detroit Auto Show, Artillery Armory, Detroit.
- Jan. 22-25—Huntington Automobile Show, Memorial Field House, Huntington, W. Va.
- Jan. 23-28—Tampa Auto Show, Fort Hesterly Armory, Tampa.
- Jan. 25-Feb. 2—Houston Automobile Show, Houston.
- Feb. 1-8—Rochester Auto Show, War Memorial Exhibit Hall, Rochester, N. Y.
- Feb. 1-9—Louisville Automobile Show, State Fair Center, Louisville.
- Feb. 8-16—Milwaukee Auto Show, Milwaukee.
- Feb. 10-15—Denver Automobile Show, Denver Coliseum, Denver.
- Feb. 15-24 — Columbus Automobile Show, Franklin County Veterans Memorial Bldg., Columbus, Ohio.

- Feb. 16-22—Syracuse Auto Show, Syracuse, N. Y.
- Feb. 19-23—8th Annual National Autorama, Conn. State Armory, Hartford, Conn.
- Feb. 21-23—Cheyenne Auto Show, Frontier Pavilion, Cheyenne.
- Mar. 1-9—Kansas City Auto Show, Municipal Auditorium, Kansas City, Mo.
- Apr. 5-13—International Auto Show, New York Coliseum, New York.

General

- Nov. 30-Dec. 1—Florida Automotive Wholesalers Association annual convention, Orlando, Fla.
- Dec. 5-6—American Petroleum Institute Oil Information Committee meeting, Biltmore Hotel, New York City.
- Dec. 10—Annual Dinner, Philadelphia Automobile Trade Assn., Philadelphia.
- Jan. 13-17, 1958—Annual Meeting, Society of Automotive Engineers, Sheraton-Cadillac and Statler Hotels, Detroit.
- Feb. 3-6—31st Annual National Automotive Accessories Manufacturers' Exposition, Navy Pier, Chicago.
- Feb. 12-14—American Petroleum Institute Div. of Marketing, Marketing Research Committee, Biltmore Hotel, New York City.
- Feb. 18-19 — Motor & Equipment Wholesalers Association convention, Statler Hotel, Los Angeles.

(Continued on page 93)

Classified Advertisements

Club forming for all types motor vehicles, except Big Three. IMVOW, Albion, N. Y.

Offering distributors foreign car parts. Eagle Sales Company, 2779 N.W. 37th Street, Miami 42, Florida.

\$1000.00 a month selling automotive shelving—parts bins—counters—gasket and tail pipe racks—shop equipment. Terrific commissions. Free 32-page catalog—jobber discounts. Write today! BERNARD FRANKLIN CORP., Hedley & Bath Sts., Dept. 58E, Phila. 37, Pa.

AUSCO...

Manufacturers of Quality Jacks
for Every Service Need!

AUTO SPECIALTIES Mfg. Co., Inc.
St. Joseph, Michigan

Calendar . . .

Continued from Page 92

Feb. 18-19—National Standard Parts Association convention, Ambassador Hotel, Los Angeles.

Feb. 27-28—American Petroleum Institute Div. of Marketing, Lubrication Committee meeting, Sheraton-Cadillac Hotel, Detroit.

May 21-23—American Petroleum Institute Div. of Marketing, midyear meeting, Roosevelt Hotel, New Orleans.

Aug. 17—21st All-American Soap Box Derby, Akron, Ohio.

NADA Chairman Post to Dahlem

Earle C. Dahlem, vice president and general manager of Wm. L. Hughson Co., San Francisco Ford dealer, has been appointed Area Chairman for the National Automobile Dealers Association. According to Frederick M. Sutter, president of

NADA, Mr. Dahlem will be responsible for reporting on the affairs of the national association to other franchised dealers in his region. He is also in charge of recruitment of new members.

Mr. Dahlem was appointed jointly by Sutter and officials of the Northern California Motor Car Dealers Association. His appointment is effective until June 30, 1958.

The *PIONEER* Tool FOR INSTALLING VALVE SEAT RINGS

The Biggest
Seller



THE FIRST . . . and still the MOST POPULAR, MOST PRACTICAL, SIMPLEST, MOST UNIVERSAL tool of its kind made. EVERLASTING . . . the first tools made over 25 years ago are still in service.

K. O. LEE COMPANY
ABERDEEN, SOUTH DAKOTA

Faster Edging of

AUTO GLASS

Plus 60% Increase
in Belt Life . . .

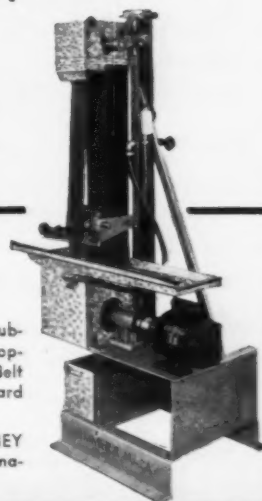
"SOMACA" No. 106-FB12RP
106" WET ABRASIVE BELT
MACHINE WITH "CONTACT
RUBBER ROLLER PLATEN"

Standard of the
Glass Shop Trade

THOUSANDS IN USE

The sensational new Contact Rubber Roller Platen on the ever popular Somaca Wet Abrasive Belt Machine makes a combination hard to beat.

Start saving TIME and MONEY now—write for complete information and prices.



SOMMER & MACA Glass Machinery Co.

Automotive Department

3624 SOUTH OAKLEY AVENUE CHICAGO 9, ILLINOIS

THOR PORTABLE POWER TOOLS

1500 tools for automotive service,
industry, construction



World's largest exclusive
manufacturer of portable
air and electric tools

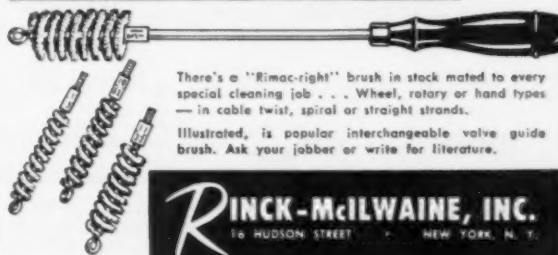
THOR POWER TOOL COMPANY

Prudential Plaza, Chicago 1, Ill.

Branches in all principal cities

SPECIAL WIRE BRUSHES?

THEY'RE STANDARD AT RIMAC!



There's a "Rimac-right" brush in stock mated to every special cleaning job . . . Wheel, rotary or hand types — in cable twist, spiral or straight strands.

Illustrated, is popular interchangeable valve guide brush. Ask your jobber or write for literature.

RINCK-McILWAINE, INC.
16 HUDSON STREET NEW YORK, N. Y.

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Ditzler offers you 2 GREAT PRIMER SURFACERS in 6 colors for every refinishing need!



1 RIP RAP

Dark Gray DZL-3475
Light Gray DZL-3355
Red Oxide DZL-7950
White DZL-645

2 SAN QUIC

Neutral Gray DZL-3600
Dark Gray DZL-3100

They're Better 7 Ways!

1. Saves you money! High solid content gives more film-forming materials. Fewer coats needed. Free from shrinkage.

2. Saves you labor! Easy sanding—requires less work to get a smooth surface. Water sands with 320 paper and dry sands with 360. No clogging of paper.

3. Gives you first class appearance! Excellent hold-out of lacquer or enamel colors over Rip Rap or San Quic produces an outstanding job with maximum gloss of final finish.

4. You get superior performance! No splitting or chipping around the feather edge. Feathers out beautifully to a mere shadow.

5. Your jobs will stand up longer! Detroit and Florida exposure tests show Ditzler's superiority in durability under the most severe weather conditions.

6. Saves you time! Famous for non-settling. No time wasted in laborious stirring. Stirs easily even after thinned material has stood for hours in gun cup. Does not settle hard in can.

7. Handles easily! Convenient easy-to-pour cans. Oblong type with LARGE opening—no waste in pouring.

• Ask your local Ditzler jobber for these outstanding undercoaters and see for yourself how much better they are.

Ditzler Color Division, Pittsburgh Plate Glass Company, Detroit 4, Michigan



DITZLER®

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

The Last Laugh



She had begged her husband for months to have his picture taken. At last he made the appointment with the photographer. When the proofs arrived, his wife exclaimed in horror. "Oh, there's only one button on your coat!"

"Thank heavens," he said, "you've noticed it at last."

An Indian petitioned a judge of a Montana court to give him a shorter name. "What is your name now?" asked the judge.

"Chief Screeching Train Whistle," said the Indian.

"And to what do you wish to shorten it?"

The Indian folded his arms majestically and grunted, "Toots."

One married man: "I'm very happy. I have a wonderful home, a good job, and the finest wife in the country."

Another man: "Who wouldn't be happy with his wife in the country?"



Two men were driving along discussing the high rate of taxes and the waste of money by the government. At the height of their discussion a school bus passed them from the opposite direction. "See! That's what I mean," exclaimed the one. "When I was a boy we walked three miles to school and three miles back home each day. Now we spend \$5,000 for a bus to pick up the children so they don't have to walk. Then we spend \$50,000 for a gymnasium so they can get exercise."

Recruit: What's that ugly insignia on the side of that bomber?

Corporal: Shh! That's the CO looking out of the cockpit window.

A street sign read, "School—don't kill a child." Beneath was childish scrawl, "Wait for a teacher."

A man isn't henpecked as long as he has a roof over his head and is able to raise it occasionally.

Brown's symptoms were alarming enough to make him go to the doctor for a checkup.

"What does the report show, Doc?"

"According to this analysis," answered the medico, "there is every indication that a small percentage of blood is getting into your alcohol system."

Explorer—"There we were surrounded by natives. They uttered savage cries and beat the ground with their clubs."

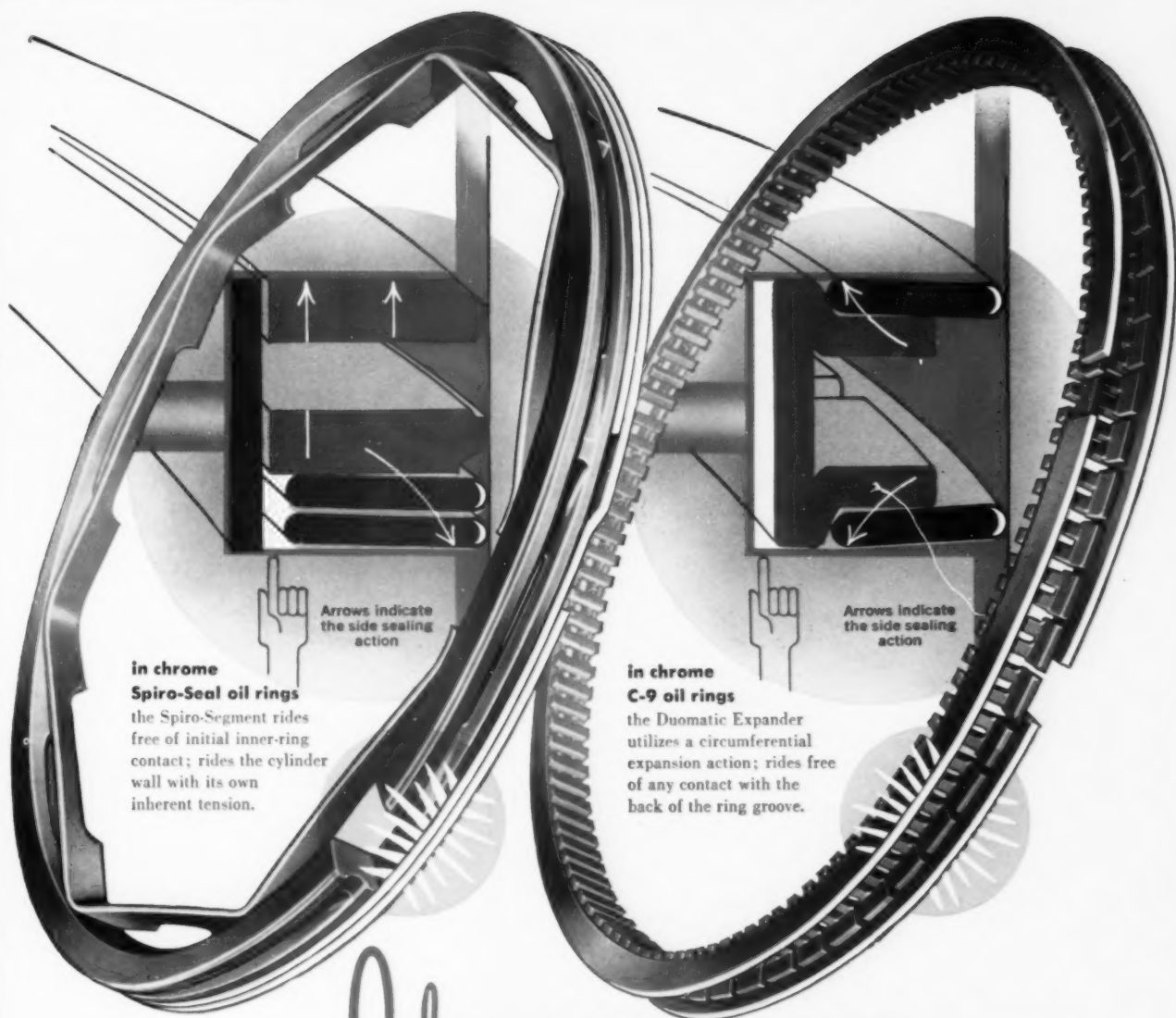
Bored listener—"Golfers probably."

A baseball rookie was proving himself an all-around nuisance during spring training. He persisted in handing out opinions on every phase of the game and giving unasked advice to the other players. One day he was watching an outfielder at batting practice and noted that the label of the bat was turned toward the pitcher.

"Oh, do you do it that way?" the rookie asked. "I always hold the bat so I can see the trademark."

"When I come to bat," replied the other evenly, "I come to hit, not to read."





**in chrome
Spiro-Seal oil rings**
the Spiro-Segment rides
free of initial inner-ring
contact; rides the cylinder
wall with its own
inherent tension.

Arrows indicate
the side sealing
action

**in chrome
C-9 oil rings**
the Duomatic Expander
utilizes a circumferential
expansion action; rides free
of any contact with the
back of the ring groove.

Arrows indicate
the side sealing
action

Only **RAMCO** has **BOTH** types of Circumferential Expansion Chrome Oil Rings to insure ***FINEST*** Get ***UP*** and ***GO!*** for **EVERY** Engine!

Not just one exclusive chrome plated oil ring . . . but two! That is Ramco Engineering's answer for you who want finest re-powering results and maximum customer goodwill. Chrome C-9 or Chrome Spiro-Seal, whichever oil ring will deliver finest re-powering results, is the oil ring you get when you use Ramco engineered 10-Up sets.

Each ring has years-ahead features which make it the outstanding performer in the engine for which each is recommended. In C-9, for example, you get Ramco's exclusive Circumferential Expansion construction. This puts up to 20% more contacts on the chrome rails to assure maximum conformability. It also provides ad-

vanced side-sealing action so important for many of today's engines.

In Spiro-Seal Oil Rings, you get the exclusive Ramco Circumferential Expansion action of the Chrome Spiro-Segment for both efficient side sealing and superior conformability. This

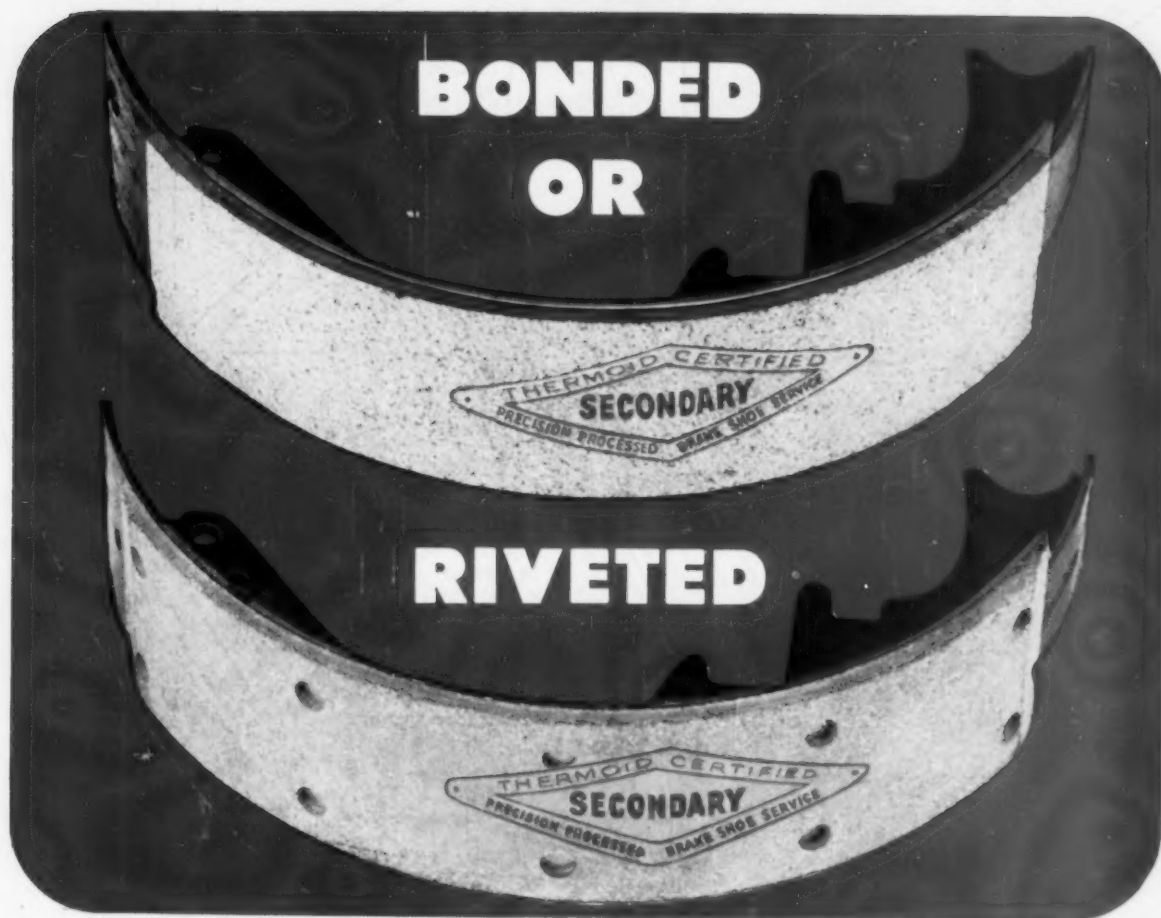
plus the Double-Life Principle which utilizes, also, a full fledged, cast-iron oil ring makes it the outstanding performer for most of today's re-ring jobs. For all the facts about Ramco engineered 10-Up piston ring sets, see your Ramco Jobber, or write Ramsey Corporation, St. Louis 8, Mo.

Whatever is ***FINEST*** for the Engine you get in

RAMCO

10_{up} piston ring sets

For Power or Standard Brakes

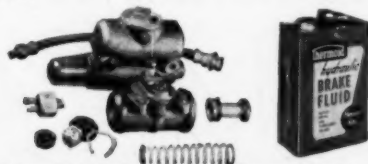


Insist on Thermoid "C-B" Lining

Whether you use bonded shoes or riveted segments, you choose quality and safety when you insist on Thermoid Custom-Built Brake Lining—the one brake lining recommended for both power and standard brakes.

Thermoid, constantly abreast of modern brake requirements, brings you the one lining that's *custom-built and certified** for all cars. And you can service 90% of the popular car market—including 1957 models—with just two fast moving assortments of Thermoid Bonded Shoes.

*The only Brake Linings certified by The Pittsburgh Testing Laboratories.



Thermoid Hydraulic Brake Parts and Fluid



Thermoid Company • Trenton, New Jersey

the standard of precision processing in brake lining, brake blocks, hydraulic fluid, cylinder assemblies, hydraulic brake parts